



# NAVAL POSTGRADUATE SCHOOL

MONTEREY, CALIFORNIA

## THESIS

**EFFECTS OF MILITARY/FAMILY CONFLICT ON  
FEMALE NAVAL OFFICER RETENTION**

by

Cody S. Sinclair

June 2004

Thesis Advisor:  
Associate Advisor:

Janice H. Laurence  
Michael J. Schwerin

**Approved for public release; distribution is unlimited.**

THIS PAGE INTENTIONALLY LEFT BLANK

**REPORT DOCUMENTATION PAGE**
*Form Approved OMB No. 0704-0188*

Public reporting burden for this collection of information is estimated to average 1 hour per response, including the time for reviewing instruction, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Washington headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302, and to the Office of Management and Budget, Paperwork Reduction Project (0704-0188) Washington DC 20503.

<b>1. AGENCY USE ONLY (Leave blank)</b>	<b>2. REPORT DATE</b> June 2004	<b>3. REPORT TYPE AND DATES COVERED</b> Master's Thesis	
<b>4. TITLE AND SUBTITLE:</b> Effects of Military/Family Conflict on Female Naval Officer Retention		<b>5. FUNDING NUMBERS</b>	
<b>6. AUTHOR(S)</b> Sinclair, Cody S.			
<b>7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES)</b> Naval Postgraduate School Monterey, CA 93943-5000		<b>8. PERFORMING ORGANIZATION REPORT NUMBER</b>	
<b>9. SPONSORING /MONITORING AGENCY NAME(S) AND ADDRESS(ES)</b> N/A		<b>10. SPONSORING/MONITORING AGENCY REPORT NUMBER</b>	
<b>11. SUPPLEMENTARY NOTES</b> The views expressed in this thesis are those of the author and do not reflect the official policy or position of the Department of Defense or the U.S. Government.			
<b>12a. DISTRIBUTION / AVAILABILITY STATEMENT</b> Approved for public release; distribution is unlimited.		<b>12b. DISTRIBUTION CODE</b>	
<b>13. ABSTRACT (maximum 200 words)</b> A significant relationship exists between work/non-work factors and retention plans among enlisted military personnel (Wilcove, Schwerin, & Wolosin, 2003; Hindelang, Schwerin, & Farmer 2004). An examination of "quality of life" (QOL) survey data found that married enlisted Sailors with children who were satisfied with non-work factors (i.e., personal development, shipboard life, standard of living/income, relationship with children, marital relationship, health) were more likely to display reenlistment intentions whereas satisfaction with work factors (i.e., professional development, shipboard life, overall QOL) was related to reenlistment intentions only indirectly through its positive effect on organizational commitment (Wilcove, Schwerin, & Wolosin, 2003). Female officers are often overlooked in military QOL research, however they face the same, if not more difficult work/family conflicts than their civilian counterparts or their male military compatriots. Data from the 2002 Navy Quality of Life Survey were used to examine life domains where work/family conflict has the greatest impact on retention. Hierarchical regression was used to identify life domains (e.g., family factors, job experiences, job satisfaction, and commitment) that are key drivers of retention intent among female Naval officers. By identifying areas that are strongly related to female officer retention intentions, policymakers can explore developing strategies to support female officers, such as family support programs, mentoring programs, or professional support networks.			
<b>14. SUBJECT TERMS</b> Officer Retention, Work/Family Conflict, Female Naval Officer, Military Family		<b>15. NUMBER OF PAGES</b> 77	
<b>16. PRICE CODE</b>			
<b>17. SECURITY CLASSIFICATION OF REPORT</b> Unclassified	<b>18. SECURITY CLASSIFICATION OF THIS PAGE</b> Unclassified	<b>19. SECURITY CLASSIFICATION OF ABSTRACT</b> Unclassified	<b>20. LIMITATION OF ABSTRACT</b> UL

NSN 7540-01-280-5500

 Standard Form 298 (Rev. 2-89)  
 Prescribed by ANSI Std. Z39-18

THIS PAGE INTENTIONALLY LEFT BLANK

**Approved for public release; distribution is unlimited.**

**EFFECTS OF MILITARY/FAMILY CONFLICT ON  
FEMALE NAVAL OFFICER RETENTION**

Cody S. Sinclair  
Lieutenant, United States Navy  
B.S., United States Naval Academy, 1997

Submitted in partial fulfillment of the  
requirements for the degree of

**MASTER OF SCIENCE IN LEADERSHIP AND  
HUMAN RESOURCE DEVELOPMENT**

from the

**NAVAL POSTGRADUATE SCHOOL  
June 2004**

Author: Cody S. Sinclair

Approved by: Janice H. Laurence, Ph.D.  
Thesis Advisor

Michael J. Schwerin, Ph.D.  
Associate Advisor

Douglas A. Brooks, Ph.D.  
Dean, Graduate School of Business and Public Policy

THIS PAGE INTENTIONALLY LEFT BLANK

## **ABSTRACT**

A significant relationship exists between work/non-work factors and retention plans among enlisted military personnel (Wilcove, Schwerin, & Wolosin, 2003; Hindelang, Schwerin, & Farmer 2004). An examination of “quality of life” (QOL) survey data found that married enlisted Sailors with children who were satisfied with non-work factors (i.e., personal development, shipboard life, standard of living/income, relationship with children, marital relationship, health) were more likely to display reenlistment intentions whereas satisfaction with work factors (i.e., professional development, shipboard life, overall QOL) was related to reenlistment intentions only indirectly through its positive effect on organizational commitment (Wilcove, Schwerin, & Wolosin, 2003). Female officers are often overlooked in military QOL research, however they face the same, if not more difficult work/family conflicts than their civilian counterparts or their male military compatriots. Data from the *2002 Navy Quality of Life Survey* were used to examine life domains where work/family conflict has the greatest impact on retention. Hierarchical regression was used to identify life domains (e.g., family factors, job experiences, job satisfaction, and commitment) that are key drivers of retention intent among female Naval officers. By identifying areas that are strongly related to female officer retention intentions, policymakers can explore developing strategies to support female officers, such as family support programs, mentoring programs, or professional support networks.

THIS PAGE INTENTIONALLY LEFT BLANK

## TABLE OF CONTENTS

I.	INTRODUCTION.....	1
A.	BACKGROUND .....	1
B.	PURPOSE.....	3
C.	METHODOLOGY .....	4
D.	ORGANIZATION OF STUDY .....	4
II.	LITERATURE REVIEW .....	7
A.	INTRODUCTION.....	7
B.	WOMEN AND FAMILIES IN THE MILITARY .....	9
C.	WORK/FAMILY CONFLICT FOR WOMEN IN TODAY'S MILITARY.....	11
1.	Marriage/Spouse Relationship.....	11
2.	Relationship with Children .....	13
3.	Family Support Programs.....	14
4.	Personal Development .....	14
5.	Personal Health .....	15
6.	Job Satisfaction .....	16
7.	Commitment to the Military .....	17
D.	NAVY QOL MEASUREMENT OF MILITARY/FAMILY CONFLICT .....	18
E.	CHAPTER SUMMARY.....	20
III.	RESEARCH METHODOLOGY .....	23
A.	PARTICIPANTS.....	23
B.	QUESTIONNAIRE.....	28
C.	ANALYTIC STRATEGY .....	29
1.	Path Model for Predicting Female Officer Retention .....	29
2.	Description of Constructs.....	31
a.	<i>Family Status</i> .....	32
b.	<i>Job Experiences</i> .....	33
c.	<i>Job Satisfaction</i> .....	33
d.	<i>Commitment to the Military</i> .....	34
e.	<i>Retention Intentions</i> .....	34
3.	Hierarchical Regression Model .....	34
D.	CHAPTER SUMMARY.....	35
IV.	DATA ANALYSIS .....	37
A.	INTRODUCTION.....	37
B.	ANALYSIS .....	37
1.	Missing Data .....	37
2.	Correlations .....	38
3.	Hierarchical Regression .....	40
4.	Path Analysis .....	42

C. CHAPTER SUMMARY.....	45
V. DISCUSSION .....	47
A. CONCLUSIONS .....	47
B. LIMITATIONS .....	50
C. RECOMMENDATIONS.....	53
D. FUTURE STUDIES.....	54
LIST OF REFERENCES.....	57
INITIAL DISTRIBUTION LIST .....	61

## **LIST OF FIGURES**

Figure 1.	Path Model for Predicting Female Officer Retention.....	30
Figure 2.	Variance Explained in Model .....	40

THIS PAGE INTENTIONALLY LEFT BLANK

## LIST OF TABLES

Table 1.	Marital Status of Female Officers in the 2002 Navy QOL Survey Compared to the Marital Status of Female Officers in the Navy and DOD in 1999 .....	24
Table 2.	Family Status of Female Officers in the 2002 Navy QOL Survey Compared to the Family Status of Female Officers in the DOD in 2001.....	25
Table 3.	Age of Children of Female Officers in the 2002 Navy QOL Survey Compared to the Age of Children of Female Officers in the DOD in 2001....	25
Table 4.	Paygrade of Female Officers in the 2002 Navy QOL Survey Compared to the Paygrade of Female Officers in the Navy and DOD in 1999. ....	26
Table 5.	Job Experiences of Female Officers in the 2002 Navy QOL Survey.....	27
Table 6.	Statistics on the Data from the 2002 Navy QOL Survey Questions Used in the Path Model for Predicting Retention Intentions of Female Officers .....	32
Table 7.	Summary of Steps Used in Hierarchical Regression for Predicting Retention Intentions Among Female Naval Officers from the 2002 Navy QOL Survey .....	35
Table 8.	Correlations Between Variables from the 2002 Navy QOL Survey Used in Hierarchical Regression/Path Analysis.....	39
Table 9.	Hierarchical Regression for Predicting Retention Intentions Among Female Naval Officers in the 2002 Navy QOL Survey .....	42
Table 10.	Direct/Indirect/Total Effects on Retention Intentions Among Female Naval Officer from the 2002 Navy QOL Survey.....	43
Table 11.	Hierarchical Regression for Predicting Long-Term Career Intentions Among Female Naval Officers from the 2002 Navy QOL Survey .....	45

THIS PAGE INTENTIONALLY LEFT BLANK

## **ACKNOWLEDGMENTS**

The author would like to thank his thesis advisors, Dr. Janice Laurence, for her support and guidance through this endeavor; his associate advisor, Dr. Michael Schwerin for volunteering to take on this project; Dr. Gerry Wilcove, for going above and beyond to provide the Navy Quality of Life Survey data; Dr. Mady Segal, for her initial literature review suggestions; and Alan Harmon and Cathy Morgan for additional female Navy officer data support. Finally, the author thanks his wife, Sarah Jo, and son, Frank, for their support and encouragement throughout this process and in all our time spent in the military.

THIS PAGE INTENTIONALLY LEFT BLANK

## I. INTRODUCTION

### A. BACKGROUND

One of the greatest strengths of the U. S. military is its people. The combat readiness of the U. S. military depends on the knowledge, training, and motivation of its service members. Today's military finds this knowledge, training, and motivation among a very diverse group of people. The diversity of military members brings special talents to each of the Services but also requires that the special needs of personnel be recognized. Women are one of the many groups that now make up a considerable proportion of the military. To retain its outstanding female personnel, the U. S. military must understand the specific personal and family needs affecting their quality of life (QOL) and hence retention.

Previous retention research has focused mainly on the impact of military/family conflicts from a blended male/female perspective. The number of women joining the military, however, has steadily increased in recent years (Martin & McClure, 2000; Johnson, 1998). In 1973, women accounted for 5.0% (20,315) of the total enlisted accessions and 7.9% (2,490) of the total officer accessions (Office of the Assistant Secretary of Defense, 2000). By 1999, these percentages drastically increased as women accounted for 18.2% (33,512) of the total enlisted accessions and 20.1% (3,286) of the total officer accessions (Office of the Assistant Secretary of Defense, 2000). More jobs are now open to women and women have increasingly taken on more vital roles in the military (Harrell, Beckett, Chien, & Sollinger, 2002; Martin & McClure, 2000). Many women are now facing the same military/family conflicts their male counterparts previously faced in the military when deciding between focusing on the family and pursuing a career. Although changes are taking place in society on the division of father/mother responsibilities in families, frequently much of the pressure remains on women to be the primary caretaker of the family unit (Spain & Bianchi, 1996; Moen, 1992).

The many demands placed on an individual by both the military and family has led to the description of the military and the family as "greedy" institutions (Segal, 1986).

The constant struggle of military members to divide their time and energy between two demanding entities places additional stress on the military member and can have adverse effects on QOL. QOL is a particularly difficult challenge for women in the military because of the additional pressures associated with their role as the primary caretaker in the family. These pressures can impact relationships with spouses, children, and other family members as well as the personal development, health, and job satisfaction of female service members.

The lack of research on officer retention, specifically of female officers, presented a challenge for this study. To overcome this shortcoming, research on enlisted military members and blended male/female officer studies were used to help identify possible areas of military/family conflict effecting female officers. Research on female officer retention issues exists, but only in a small number of unpublished, non-peer reviewed sources. An interpretation of these sources was included in this study to further demonstrate how the military/family conflicts found in the military directly affect women.

Expectations of commitment and time requirements of all service members are increasing. Recent world events in Afghanistan and Iraq have resulted in increased operational requirements and a more dangerous world for military members. These events portend an increase in family conflict for all service members, but in particular female members balancing military and family life. To retain adequate numbers of highly trained female personnel, the U. S. military must determine how these issues are impacting their QOL before it becomes a critical retention issue.

In the area of QOL, Wilcove, Schwerin, and Wolosin (2003) examined the relationship between work/non-work factors and retention plans among enlisted military personnel. An examination of QOL survey data found that married enlisted Sailors with children who were satisfied with non-work factors (i.e., personal development, shipboard life, standard of living/income, relationship with children, marital relationship, health) were more likely to display reenlistment intentions while satisfaction with work factors (i.e., professional development, shipboard life, overall QOL) was related to reenlistment intentions only indirectly through its positive effect on organizational commitment

(Wilcove, Schwerin, & Wolosin, 2003). Female officers face the same, if not more difficult work/family conflicts that can affect their QOL and ultimately their retention decision.

In this study, the data from the *2002 Navy Quality of Life (QOL) Survey* are used to examine life domains (e.g., family factors, job experiences, job satisfaction, and commitment) where work/family conflict has the greatest impact on retention for female officers. By identifying areas that are strongly related to female officer retention intentions, policymakers can explore developing strategies to support female officers, such as family support programs, mentoring programs, or professional support networks.

## B. PURPOSE

This study addresses the need for research into the effects of life domains on women in the military (Bourg & Segal, 1999; Keegan, 1999). There are currently many benefits designed for families to encourage continued service including pay, job security, health care, housing, and retirement benefits (Defense Department Advisory Committee on Women in the Services, 2003; Segal, 1989). Unfortunately these benefits might not be adequately addressing female officer QOL issues as female officers' retention rates are lower than male officers (Defense Department Advisory Committee on Women in the Services, 2003). Understanding the specific areas of conflict that lead to lower retention among female officers is vital to retaining more of the experienced and high-quality personnel in the military.

The purpose of this research is to examine the military/family conflicts that exist in the current Navy and its effects on the retention intentions of female naval officers, as reported in the *2002 Navy QOL Survey*. The level of conflict between the military and the military member is studied by looking at the impact family factors have on female officer's job experiences, job satisfaction, and commitment to the military. The results of studying these specific areas of possible conflict may point to the QOL issues that lead women to leave the Services.

Military leaders have acknowledged the importance of QOL issues in maintaining combat readiness (Martin & McClure, 2000). A large part of maintaining readiness is

retaining the qualified personnel needed to keep the military running smoothly. Past studies of Navy QOL Surveys have identified life domains that are tied to retention intentions (Wilcove, Schwerin, & Wolosin, 2003). This study further explores those life domains that were found to be significant in retention intentions to determine the impact they might have on female officers. By identifying the areas that are strongly tied to female officer retention intentions policymakers will have a better understanding of how their future decisions can impact the retention of a wider range of officer personnel.

### **C. METHODOLOGY**

To determine the areas where military/family conflict has the greatest impact on retention intentions, data from the *2002 Navy QOL Survey* were analyzed. Hierarchical regression analysis was then used to examine the impact of family factors, job experiences, job satisfaction and commitment on retention intentions. It was expected that the same areas found to be significant in retention intentions for men would also be significant for women. This study further explores those areas that were found to be significant in retention intentions in order to determine the additional impact they might have on female officers.

### **D. ORGANIZATION OF STUDY**

The first two chapters of this study provide a brief background of research into the family, military, and retention issues facing female officers. This includes a brief review of the history of women and families in the military. Additionally, these chapters contain current research on the retention issues facing military families and women in particular. The conclusion of this chapter focuses on the impact of QOL and the Navy's current QOL surveys.

The next chapter explains the research methodology used in this study. An explanation of the data from the *2002 Navy QOL Survey* along with the means from which these data were collected is included. The model and constructs used to analyze the data are explained. Finally, the variables chosen and reasons for the inclusion of these variables are clarified in this section.

The final two chapters focus on the data analysis and the conclusions that can be drawn from the results. Recommendations are also provided that may improve areas of QOL for female officers. The expectation was that family issues are strongly and positively related to retention intentions for female officers than in past studies of male service members.

THIS PAGE INTENTIONALLY LEFT BLANK

## **II. LITERATURE REVIEW**

### **A. INTRODUCTION**

The presence of women in the military has been increasing steadily in recent years. At the initial creation of the all volunteer force in 1973 women made up only 2.2% (42,278) of the enlisted service members and 4.2% (12,750) of the officers in the military (Office of the Assistant Secretary of Defense, 2000). Today women make up over 14.3% (164,926) and 14.7% (30,031) of the enlisted and officers, respectively (Office of the Assistant Secretary of Defense, 2000). Although the most recent Population Representation report shows that women in the military are not as likely to be married as their male counterparts (72.9% of male officers are married versus 52.7% of female officers), the trend toward more married military service members was shown to be occurring at the end of the 1990s (Martin & McClure, 2000; Johnson, 1998). In 1980, 50.3% of military personnel were married and by 1995 this number peaked at 59.9% (Military Family Research Center, 2001). Since then the percentage of married service members has declined to just 51.4% in 2001 (Military Family Research Center, 2001), while at this same time the number of single parents in the military steadily increased from 3.7% in 1989 to 6.0% in 2000 (Military Family Research Center, 2000). Overall, these trends have resulted in a more family oriented military force as can be seen by the total number of family members (1.88 million) outnumbering the active duty members (1.37 million) by over 40% (Military Family Research Center, 2001).

In the future, even more women may be considered to meet the manpower needs of the military. The military is depending increasingly on higher quality and more experienced military personnel to operate the military's highly technical warfare systems (Laurence, 2004). As Laurence suggests, the supply of these more able people may be limited and the competition between the military and the civilian labor market is keen not only to attract this talent pool, but also to retain them (2004). Retention is even more important as military service members must be retained for longer periods to complete the education and training needed to acquire the technical skills necessary to effectively

operate in the military. Once these skills are obtained the military must keep its personnel to make-up for the investment of additional time and money spent in training the personnel (Segal & Harris, 1993).

One result of this need for military members to stay in the military longer is that they are older and more likely to want to start a family (Martin & McClure, 2000). The additional skills obtained by military personnel results in them being given more professional responsibilities. At the same time, the military members who marry and start a family will have additional family responsibilities. These factors can lead to additional conflict between the military and the family.

The military and the family have been described as “greedy” institutions (Segal, 1986). The ability of military members to divide their time and energy between two demanding entities places additional stress on the military member and can have adverse affects on the family. Changes in society are increasing this stress as women are taking on a greater role in the workforce (Segal 1986, 1989; Moen, 1992) including the military.

The idea of military/family conflict has been frequently studied from the viewpoint of male service members as well as from the viewpoint of their wives (Bourg & Segal, 1999; Rosen & Durand 1995). Unfortunately, the impact of work/family conflict on female military members has not been studied closely. The unique social pressures on women with regards to family and the increased role that women are playing in the military make the work/family conflict for women in the military of much greater concern.

The 1999 Active Duty Survey found that female officers ranked the “amount of personal/family time you have” as the most important reason for considering leaving the military (Defense Department Advisory Committee on Women in the Services, 2003, p. iii). A 2003 study by the Defense Department Advisory Committee on Women in the Services (DACOWITS) found similar results in that “family and personal issues were the most frequently cited reasons for leaving the military” (2003). When military officers and officer family members in the DACOWITS focus groups were asked about the gender differences in retention rates, 95% of the focus groups raised family issues as the reason female officers have lower retention rates.

To understand how the work/family conflict is affecting female officer retention, the areas of life that contain the most conflict must be studied. The Navy attempts to isolate many of those areas using the *Navy QOL Survey*. First administered in 1999, the *2002 Navy QOL Survey* provides questions about the satisfaction within different life domains (Wilcove, Schwerin, & Wolosin, 2003). Based on previous research the life domains from the *QOL Survey* that likely capture the most military/family conflict for female officer includes the importance of marital relationships, relationships with children, relationships with relatives, personal development, health, job satisfaction and commitment to the military. The premise is that by determining the areas in which military members are the least satisfied, military leaders might be able to explain and counter the reasons for service members returning to civilian life (Segal, 1989).

## **B. WOMEN AND FAMILIES IN THE MILITARY**

The changes in women's roles in and around the military have led to many studies focused on taking care of families to maintain a strong military force (Segal, 1989; Albano, 1994). Initially, the military support centered on taking care of military wives and their children monetarily (Albano, 1994). Over the years this slowly changed to include many support programs aimed at helping the spouses and children of military members. The advent of a large standing volunteer force in 1973 further accentuated the need for family support programs, as single males could no longer make up the entire force (Albano, 1994; Segal, 1989).

The programs created to support military families evolved slowly over time: initially they were aimed at taking care of only the male majority. As women began serving in the military they were expected to pursue either a family or a career, but rarely both simultaneously. Military programs and regulations reflected the social view of a woman's sole responsibility for taking care of the family. Marriage was allowed, but not condoned for women in the military. Prior to the 1972 Supreme Court decision in *Frontiero v. Richardson*, if a female service member was married her spouse was not given the same military benefits provided to military wives (Women's Research and

Education Institute, n.d.; Albano, 1994). Furthermore, women in the military at this same time were forbidden from having children and could be discharged from the service for pregnancy or parenthood (Albano, 1994).

The importance of women serving in an all-volunteer military force was eventually recognized at the highest levels of the government and military organizations (Women's Research and Education Institute, n.d.). As a result, more occupations were made available to women, the families of female service members were given the same benefits as male military members, and women were allowed to have children while serving in the military (Women's Research and Education Institute, n.d.; Harrell, Beckett, Chien, & Sollinger 2002; Albano, 1994). The need for greater numbers of people to make up the large volunteer force and the changing role of women in the society brought an end to many of the unequal rules and practices.

Today, women are entering the military at a growing rate. In 1999, women accounted 18.2% (33,512) of the total enlisted accessions and 20.1% (3,286) of the total officer accessions (Population Representation in the Military Services, 1999). More jobs are now open to women outside the traditional administrative and health care professions and woman have increasingly taken on more vital roles in the military (Harrell, Beckett, Chien, & Sollinger, 2002; Martin & McClure, 2000). Men still greatly outnumber women in tactical operations professions (42.8% to 9.0% respectively) and are much less likely to hold administrative (14.3% to 44.3%) and health care positions (6.0% to 13.0%) according to the FY1999 Population Representation in the Military Services report. However, this imbalance is slowly changing as other fields in the military reflect. Women have nearly equal representation in the engineering/maintenance, 11.9% men to 10.5% women, and equal representation in the scientist/professional field at 4.9% (Office of the Assistant Secretary of Defense, 2000).

The military was also forced to accept more of its service members getting married and having children. The technological training necessary to operate the complex military systems requires that military members stay in the military for longer periods (Martin & McClure, 2000). This requirement for service members means that they are older and much more likely to marry and start a family while they are in the

service (Segal & Harris, 1993). Looking at current demographics reveals the trend toward a more family-based military. In the last decade, the total number of military personnel declined whereas the total number of military family members increased (Martin & McClure, 2000). This shift resulted in the total number of family members outnumbering the active duty members by over 40 percent (1.9 million to 1.4 million) in 2001 (Military Family Research Center, 2001). More family members in the military means there are more chances for conflicts to form over the demands between work and family.

## C. WORK/FAMILY CONFLICT FOR WOMEN IN TODAY'S MILITARY

### 1. Marriage/Spouse Relationship

The numbers of women joining the military has continued to increase over the years as the opportunities for them expand (Martin & McClure, 2000; Office of the Assistant Secretary of Defense, 2000; Johnson, 1998). At the same time, the restrictions for pursuing both a family and a career have also lessened in both society and the military. Unfortunately, these factors have not lessened the conflict that exists between work and family. Women now face many of the same conflicts their male counterparts faced when dividing their focus between their family and military career. The equality between a father's and mother's responsibilities in the family is being scrutinized in society today, but has not yet been resolved (Segal, 1986). Because of deeply ingrained career expectations men may still be reluctant to take on the primary role in the family that is often expected when the mother is a military member (Spain & Bianchi, 1996; Moen, 1992). This social dilemma increases conflict within the family as well as between family and work.

In today's military nearly half of all women are married (Martin & McClure, 2000). Whereas female officer marriage rates closely resemble the overall average for all military service members, male officer marriage rates are significantly higher. In 1999, 52.7% of all female military officers were married whereas 72.9% of all male military officers were married (Office of the Assistant Secretary of Defense, 2000). There are many factors that could be contributing to this disparity in marriage rates. For those female service members who are married their spouse must accept a greater role in the

family and may face other challenges that place more stress on the family. Military family support programs, although open to both husbands and wives of military members, are dominated by and geared toward wives (Russo, Dougherty, & Martin, 2000; Johnson, 1998). In the military family setting these policies leave men who are married to female service members feeling isolated both from society and the military family (Martin & McClure, 2000).

Career opportunities for husbands of military members can be one of the major sources of work/family conflict. Finding jobs in the vicinity of their wives' duty station that offer adequate pay is often difficult for civilian spouses (Johnson, 1998). Studies show that military wives earn considerably less than civilian wives because of the requirement to move frequently and the requirement for the military spouse's job to be flexible in order to take care of any family issues (Hosek, Asch, Fair, Martin, & Mattock, 2002). Although spouse employment programs have been shown to have a significant effect on helping military spouses find jobs, these programs may not exist at all duty stations (Schwartz & Wood, 1991) or may not be geared toward professional men (Russo, Dougherty, & Martin, 2000; Johnson, 1998). The bottom-line is that women in the military with working husbands often take into consideration the impact of their military career decisions on their husband's career (Johnson, 1998) and their concerns may be leading many to leave the military (Segal & Harris, 1993).

Surprisingly, over a third (37.4%) of the married women in the military are married to other service members (Officer of the Assistant Secretary of Defense, 2000). A better understanding of the military and the expectations may reduce the conflict between the military and family in these cases. However, the demands placed on both service members may not decrease overall, requiring them to constantly feel that they must make compromises on career decisions and family responsibilities. Among the factors that might impact career decisions are the possibility that one of the service members might feel that he or she must sacrifice their career to follow the other in order to be co-located or that he or she must choose assignments that allow for one member to take care of the family. Some studies have shown that the unwillingness on the military's part to work with dual-career families is another conflict that causes both men and women to voluntarily separate from active duty (Keegan, 1999).

## **2. Relationship with Children**

Another challenge for women who want to start a family while in the military is deciding when the best time is to fit this major life change into their career. Studies find among military service members serving in combat units that having children increases the work family conflict (Bourg & Segal, 1999) whereas other studies have shown that having children increases the probability of retention in some officer professions (Fagan, 2002). Focus groups of female officers in one study reported that women feel uneasy about having children and starting a family during their normal career progression (Keegan, 1999). Even in mixed gender groups “family reasons” are the most frequently cited explanation for the difference between the retention rates of men and women (*DACOWITS 2003 Annual Report*, p. 9). Particularly among active duty women, the military is seen to interfere too often with the family and to hinder family stability (*DACOWITS 2003 Annual Report*, p. 6).

Women in society have dealt with the work/family conflicts associated with having children in the past by “reducing work hours, moving to a less demanding job or to shift work, and leaving the job entirely” (Moen, 1992, p. 40). Unfortunately, because of the military’s strictly defined work structure and promotion policies, these choices are not available to most women in the military. Instead, women in the military must chose to delay having children until after their career, to sacrifice the success of their career at some point, or to leave the military.

These are tremendous pressures that may be causing many single women to decide to leave the military to start their families (Defense Department Advisory Committee on Women in the Services, 2003; Keegan, 1999). Unfortunately, there are few studies looking at the impact of family decisions on the retention of single female service members (Bowen, 1989). The popular perception among women in the military is that they must sacrifice the success of their career to get married and have children (Keegan, 1999). New marriages and young children require more time and energy. Unfortunately, adequate time and support for families may not currently be given to address female service members’ concerns.

### **3. Family Support Programs**

Another link that has been found in determining a service member's desire to remain in the military is the importance of family support programs. Perceived military support of families has been shown to be a major factor in determining the service member's level of commitment to the military (Bourg & Segal, 1999) and their spouse's support of the service member continuing their military career (Segal & Harris, 1993; Szol & Seboda, 1984). These findings suggest that the military might be able to retain more of its people by improving family support programs and policies.

The increasing numbers and diversity of military family members today makes the successful implementation of family support programs extremely difficult. The large numbers of families in the military has extended the military beyond its capability to provide all the necessary support in and around the base. More families now live away from the base and have lives completely separate from the military. The sense of community among military members once touted by retired personnel may be disappearing from the military (Martin & McClure, 2000). This trend results in even less loyalty from service members and, more importantly, their family members. Considering that family members have a major impact on service member's commitment to the military (Bourg & Segal, 1999) and their retention decisions (Rosen & Durand, 1995) this aspect of "community" in the military-family relationship may have a major impact on retention.

The military's support services for families have served to offset pay differences between the military and the private sector (Martin & McClure, 2000). Services such as child care, education, health care, and personal and professional training programs, can greatly impact the QOL of military personnel and strengthen the commitment of military members and their family (Segal & Bourg, 1999). These family support programs may become less effective unless they are able to adapt and reach a wider demographic population that is often located outside military bases.

### **4. Personal Development**

There are many programs in the military aimed at personal development. These programs provide educational and training opportunities and can have a major impact on retention. Education and training opportunities were the second most frequently

mentioned tangible factor keeping people in the military according to Defense Advisory Committee on Women in the Services' (DACOWITS) 2003 report. The full impact of these programs is difficult to assess as married female officers, especially those with children, may find that personal development programs compete with family time and require additional commitment to work.

Despite the great success of personal development programs, one of the most basic areas of personal development may be lacking for female service members--mentorship. The lack of mentorship for women at all ranks, but especially higher in the chain of command, has been noted as a concern of female service women in many studies (Keegan, 1999; Johnson, 1998). More fields may be open to women, but the lack of role models and mentors may slow the progress of women into these new fields. Furthermore, even if the more common barriers to women's success in the work place, such as gender discrimination and sexual harassment, are effectively eliminated, the lack of mentorship will provide an unfair advantage to men. Women's personal development will suffer without the encouragement and training provided by mentoring and they will leave when they are no longer able to progress in their careers.

### **5. Personal Health**

The benefits provided to military service members and their families have traditionally been a major contributing factor in the retention of personnel. The Defense Advisory Committee on Women in the Services' (DACOWITS) most recent report found that military benefits were the number one tangible factor for personnel to want to remain in the military (2003). Approximately two-thirds of DACOWITS' focus group members cited benefits as a major reason to stay in the military. Considering these results, it is alarming that the DACOWITS report also found that women consider their health care less than satisfactory (Defense Department Advisory Committee on Women in the Services, 2003).

Female service members have special health care needs that must be addressed by the military. In focus groups led by DACOWITS, female service members expressed concern for a lack of continuity of obstetrics and gynecological (OB/GYN) care in Military Treatment Facilities (Defense Department Advisory Committee on Women in the Services, 2003). Additionally, the availability of timely appointments, dialogue with

health care professionals, customer service, and patient privacy were cited as concerns from the female participants (Defense Department Advisory Committee on Women in the Services, 2003). These concerns are related to basic health care needs that if not met may negatively affect retention.

Health care is an important aspect of the military both for retention and readiness. The dangerous settings and deployment schedules leads to high levels of stress that can affect the health of service members. Women seem to be affected more than men by these work factors, as they are more likely to report high levels of stress and depression (Bray, Camlin, Fairbank, Duntzman, & Wheless, 2001). Whether they report stress more frequently, experience more stress, or react differently to stress is still in question, but studies show that women do perceive more stress with regards to family than men (Bray, Camlin, Fairbank, Duntzman, & Wheless, 2001). Fortunately, women have been found to be better at coping with the stress they encountered than their male counterparts (Bray, Camlin, Fairbank, Duntzman, & Wheless, 2001). The problem is that it is difficult to determine the numbers of women who are coping by simply leaving the military.

## **6. Job Satisfaction**

The importance of career or job satisfaction in the retention of personnel should not be overlooked. Past studies show that military officers rank job satisfaction as one of the major factors for retention (Szol & Seboda, 1984). In the 2003 Defense Advisory Committee on Women in the Services (DACOWITS) study, “love for the military job” was cited as the most frequently mentioned intangible factor keeping people in the military (Defense Department Advisory Committee on Women in the Services, 2003, p. 5).

In job satisfaction research done in the civilian sector, using data from the General Social Surveys, family related variables such as spouse’s work status, spouse’s occupation, and satisfaction with family had little effect on job satisfaction (Hanson, 1992). Furthermore, the study showed that “regardless of gender, work status, or time period, the presence of children has no effect on the job satisfaction of married respondents” (Hanson, 1992). The problem with relating these studies of civilian jobs to the military is that the commitment required for each is in most cases disproportionate.

Military service members face long periods of separation from their families and children that can potentially have a greater impact job satisfaction. The Navy's QOL Survey asks questions about leadership, support, and treatment that might be more effective in getting at the specific family related factors that are unique to that military and have a major impact on job satisfaction.

## **7. Commitment to the Military**

Research points to the significant impact that both a service member's and their family's commitment toward the military have on retention (Bourg & Segal, 1999; Segal & Harris, 1993). The implication of this finding is that when people feel a sense of belonging or emotional attachment to an organization they would be more likely to remain with that organization. In previous Navy QOL studies organizational commitment to the military was shown to be a mediating factor for work factors in retention intentions (Wilcove, Schwerin, & Wolosin, 2003). In the case of female officers, family factors may impact both work factors and commitment to the military directly. This connection between work factors, family factors, and commitment may help to explain female service members' retention decision as a result of the increased military family conflict present in their lives.

Recent literature on organizational commitment research points to the need for a common set of definitions and measures for commitment (Gade, 2003). Meyer and Allen developed a comprehensive commitment theory with three separate definitions: affective commitment, defined as the “*want to*” or commitment based on “emotional attachment to, or identification with, the military service or unit” (Gade, 2003, p. 164); continuance commitment, defined as the “*need to*” or commitment based on financial or employment concerns (Gade, 2003, p. 164); and normative commitment, defined as the “*ought to*” or commitment based on “a moral obligation or ‘calling’, not merely a job” (Gade, 2003, p. 164). In the *2002 Navy QOL Survey* seven of the eight questions on commitment come from Meyer and Allen's emotional or affective commitment scale (Tremble, Payne, Finch, & Bullis, 2003). The reliability of commitment to the military in the Navy's QOL survey and the clearly established relationship between commitment and retention intentions (Allen, 2003) makes commitment an important part of retention research.

A brief look at the research in these seven areas (marriage/spouse relationship, relationship with children, family support programs, personal development, personal health, job satisfaction, and commitment to the military) provides just a few of the examples of areas where work and family conflict. The ability of military members to balance their careers and families has a major impact on satisfaction with their QOL. The military member's satisfaction with her job, family relationships, community, and support programs all contribute to increase commitment and retention (Bowen, 1989; Rosen & Durand, 1995; Segal & Bourg, 1999). These factors point to the importance of the military looking into the QOL areas that are most closely related to service members retention intentions.

#### **D. NAVY QOL MEASUREMENT OF MILITARY/FAMILY CONFLICT**

In the military today, identifying the areas of military/family conflict that negatively impact a member's QOL may provide the means to answer many of the military personnel retention problems. Improved family support and a renewed focus on family needs may affect not only military member's QOL, but also result in the expansion of military members' commitment, loyalty, and energy (Bourg & Segal, 1999). The military demands an incredibly high level of commitment from its members. Military service members must be prepared to take physical risks, move their family frequently, endure family separations, put in long working hours, and follow normative constraints outside of work (Segal, 1986, 1989). Although other jobs in society might involve some of these requirements, it is the collective sum that makes the military unique (Segal, 1989). These demands are likely to have an impact on the member's satisfaction within a variety of areas of their life. By determining those areas of the greatest negative impact on a member's satisfaction then the military may be able to attack those areas to improve retention.

The Navy's QOL studies have focused on "rating satisfaction with areas of one's life and examining the relationship between those life needs and organizational outcomes, such as personnel readiness, retention, and job performance" (Schwerin & Wilcove, 2003). A person's satisfaction in various areas of his/her life has been shown to correspond to better quality of work and an increased commitment. The hope is that the

increased commitment will translate into a positive retention decision. The life domains that the Navy selected for its *2002 QOL Survey* include career and job, shipboard life, personal health, sailor preparedness, residence, neighborhood, leisure and recreation, relationships (with friends, relatives, spouse, children), personal development, standard of living, spiritual well-being, and overall life satisfaction.

Previous QOL studies focusing on combined samples of enlisted men and women found that when life domains are divided into work and personal (non-work) domains, the personal domains are linked to retention intentions and work domains are linked to retention through organizational commitment (Wilcove, Schwerin, & Wolosin, 2003). This was found to be true using three different demographic groups: married enlisted Sailors with children, unmarried enlisted Sailors without children, and married enlisted Sailors with children at the critical enlistment point (E-4 to E-6 with less than 11 years of service). Findings from Wilcove, Schwerin, and Wolosin (2003) showed that for married enlisted Sailors with children the personal factors (marital relationship, relationship with children, personal development, health, standard of living, shipboard life, and professional development) accounted for 22% of the variance in retention intentions. Furthermore, this study was significant because it was the first model developed for Navy personnel that “quantitatively links QOL domains directly with retention plans” (Wilcove, Schwerin, & Wolosin, 2003, p. 149).

Hindelang, Schwerin, and Farmer (2004) replicated this study using Marine Corps enlisted men and women. The results indicated that the model is useful for other services. In the Marine Corps, however, for unmarried enlisted Marines without children the job factors domain, not the personal factors domain, was a better predictor of reenlistment intentions (Hindelang, Schwerin, & Farmer, 2004). This indicates that different demographic groups may vary on the impact of personal factors to retention intentions. In this study females were specifically mentioned as one of those groups. Female naval officers may be more likely to agree more with Navy enlisted sailors than Marine enlisted personnel because of the common norms and familiar working environments within the Navy. However, due to the increased family pressure for females and the increased job responsibilities officers there will certainly be differences between men and women, as well as between officers and enlisted.

The *Navy QOL Surveys* provides an effective way to begin analyzing the impact of various areas of personal and work factors on female officer retention. Unfortunately, female officers' QOL results have not been the focus of an exclusive study despite the fact that female naval officers are affected by unique gender, family, and QOL issues (Keegan, 1999). The talents and diversity that women bring to the military require that a closer look be given into the areas that specifically impact their QOL. Determining the areas that have the greatest impact can result in strategies developed to improve the military's personnel readiness and retention.

#### **E. CHAPTER SUMMARY**

The future of maintaining a strong U. S. military is dependent upon keeping a large number of service personnel satisfied with their life. Life satisfaction may cover a wide range of areas to include personal, family, job, pay, and health issues. Further complicating this challenge is that satisfaction differs among various sub-groups. The focus of this chapter was to demonstrate the unique family conflicts female service members confront that may affect their satisfaction with QOL when pursuing a military career. Stressful life choices such as marriage and having children may conflict with career aspirations and lead to retention problems for females.

Female service members face difficult conflicts in dealing with family issues in the military. Although families have become an important aspect of the military culture, the support programs that exist for families have traditionally been designed to help only military wives. The importance of determining female service members' satisfaction with areas involving family members, including relationships with children, relatives, and spouses, will help determine how to improve support programs that will positively improve their QOL and keep them in the military.

Women have special needs for their families, health, and job progression. These needs can be more easily met with support programs than overcome by monetary benefits. Taking care of the husbands of service members, improving women's health care, and providing mentorship to women may be just a few examples of support programs to deal with female military members' needs. By determining these areas of

females' lives that are the most dissatisfying policymakers will be more informed and therefore make better choices for how to design programs that will benefit a wider range of military personnel.

Job satisfaction for women may likely be more closely tied with family issues than for men. Although men may also face the conflict between family and career, women are required to make a much more limited decision on issues of marriage and having children when pursuing a military career. By not providing programs and policies that allow females to balance their career and family, low job satisfaction may lead many to leave the service.

Commitment to the military has been shown to be one of the closest links between service members and their retention intentions. Service member's satisfaction with health care, career development and job satisfaction may all have some impact on their commitment to the military. In the case of female service members, however, the impact of family factors on each of these areas likely has the greatest influence on their commitment and thus their retention intentions.

The Navy's *QOL Survey* is the tool that can bring the pieces of the female officer retention puzzle together. By following up on what other studies have found to impact retention among military members and studying those life domains one can determine what has the greatest impact on retention intentions. In the case of this study the challenge was to apply the vast amount of research that has been done primarily on the retention of enlisted men in the military to female officers. There are likely differences between the military/family conflicts affecting these groups and to effectively combat the retention problem the Navy leadership must fully understand the specific issues facing women and how they affect retention intentions. By identifying the areas of conflict that cause its female service members to be the most dissatisfied, the military can effectively manage current programs or create new ones if necessary to fulfill female military service member needs.

THIS PAGE INTENTIONALLY LEFT BLANK

### **III. RESEARCH METHODOLOGY**

#### **A. PARTICIPANTS**

The *2002 Navy QOL Survey* was mailed to officers and enlisted members who were selected randomly from a list of all full-time active duty Sailors. The number of surveys mailed out to Sailors was determined by selecting a random, representative sample stratified by paygrade, gender, minority vs. non-minority status, and Hispanic vs. non-Hispanic status. Of the 16,833 surveys mailed out, 5,114 were returned for an overall return rate of 31%, (G. L. Wilcove, personal communication, December 15, 2003). The undeliverables (1,783) were not taken into account in the return rate. Although the exact return rate for female Naval officers was not available, gender was considered in the selection process and the number of women returning the survey (n=887) was adequate for analysis.

A representative sample of female Naval officers by marital status, dependent status, paygrade, and job experiences was important for the focus of this study. The more representative the sample was of the female Naval officer population as a whole, then the more reliable and externally valid this study's findings would be on the effects of family and job factors on retention intentions. The demographic information provided by the survey was compared with data reported by the Military Resource Center in the *2001 Demographics Report* and by the Office of the Assistant Secretary of Defense (Force Management Policy) in the *FY1999 Population Representation in the Military Services Report*. Female Naval officer statistics were used as a comparison when available in these two reports. Comparisons to the Department of Defense officer (and in some cases female officer) population were made when female Naval officer statistics were not available.

The percentage of married female Navy officer respondents (see Table 1) in the *2002 Navy QOL Survey* (55.2%) was less than the overall percentage of married military officers (68.8%) reported in the Military Family Resource Center's *2001 Demographics Report*. However, because female officer marriage rates are historically much lower than male officers (52.7% to 72.9% in the *FY1999 Population Representation in the Military*)

the marriage rate from the survey was higher than the female officer population. This trend is even more evident in the Navy where 48.2% of female officers were married while 69.2% of the male officers were married (Office of the Assistant Secretary of Defense, 2000). The percentage of female officers from the QOL survey who are married to other service members (20.7%) is one area that closely resembles the dual-service marriage statistics in the Fleet (19.5% according to the *FY1999 Population Representation in the Military Services Report*). The overrepresentation of married female officers in this study must be taken into account when interpreting the impact the results might have on the current Navy population.

Table 1. Marital Status of Female Officers in the 2002 Navy QOL Survey Compared to the Marital Status of Female Officers in the Navy and DOD in 1999.

<b>FEMALE OFFICERS</b>	2002 Navy QOL Survey (n=884)	1999 Navy (n=7,669) <sup>a</sup>	1999 DOD (n=30,031) <sup>a</sup>
Married	55.2% (488)	48.2% (3,693)	52.7% (15,823)
Not Married	44.8% (396)	51.2% (3,976)	47.3% (14,208)
Dual Service Marriage	20.8% (184)	19.5% (720)	37.4% (5,919)

<sup>a</sup> Data from the *FY1999 Population Representation in the Military Services Report*

The percentage of female officer respondents in the *2002 Navy QOL Survey* with children (37.2%) was less than the overall percentage of female officers with children in the Department of Defense (44.1%) as reported in the *2001 Demographics Report*. A closer look into this issue reveals that the greatest difference is found among those female officers who were married with no children (see Table 2). The higher percentage of survey respondents married with no children and the lower percentages of those single without children and married with children might influence the ability to generalize about how family factors impact retention intentions in this study.

Table 2. Family Status of Female Officers in the 2002 Navy QOL Survey Compared to the Family Status of Female Officers in the DOD in 2001.

FEMALE OFFICERS	2002 Navy QOL Survey (n=878) <sup>a</sup>	2001 DOD (n=1,369,143) <sup>b</sup>
Single, No children	37.8% (332)	42.2% (578,222)
Single, with children	6.7% (59)	6.4% (87,475)
Married, No children	24.9% (219)	13.7% (187,589)
Married, with children	30.5% (268)	37.7% (515,857)

<sup>a</sup> Children include children age 21 or younger  
<sup>b</sup> Data from the *2001 Demographics Report*, children include children age 23 or younger

Table 3. Age of Children of Female Officers in the 2002 Navy QOL Survey Compared to the Age of Children of Female Officers in the DOD in 2001.

AGE OF CHILDREN	2002 Navy QOL Survey Female Officers with Children (n=499)	2001 DOD Active Duty Members with Children (n=1,196,122) <sup>e</sup>
Young Children <sup>a</sup>	32.9% (164)	38.5% (460,570)
School Age Children <sup>b</sup>	33.1% (165)	33.6% (402,263)
Teenage Children <sup>c</sup>	30.1% (150)	24.2% (289,840)
Young Adults <sup>d</sup>	4.0% (20)	3.6% (43,449)

<sup>a</sup> QOL ages 0 to 4 years 11 months, DOD ages 0 to 5 years  
<sup>b</sup> QOL ages 5 to 11 years 11 months, DOD ages 6 to 11 years  
<sup>c</sup> QOL ages 12 to 18 years 11 months, DOD ages 12 to 18 year  
<sup>d</sup> QOL ages 19 to 20 years 11 months, DOD ages 19 to 23 years  
<sup>e</sup> Data from the *2001 Demographics Report*

The distribution of the ages of children of the female officer respondents closely matched the overall percentages of the ages of minor dependents of active duty military members reported in the Military Family Resource Center's *2001 Demographics Report* (See Table 3). The ages of female officer dependents were evenly distributed (approximately one third) between the ages 0-5, 5-12, and 12-18, with only a small

percentage over 18 years of age (less than 5%). In the active duty military, the dependents' ages were skewed slightly toward younger children 0-5 (38.5%) whereas the high school age dependents made up slightly less than one third of the dependents (24.2%). Younger children likely impact family factors and should be taken into account.

The breakdown by paygrade of the female officer survey respondents (see Table 4) shows a much more senior group than in the overall population of female officers in the Navy. The percentage of O-1 to O-3 and O-4 to O-6 female officers in the Navy was 62.7 % and 37.2% respectively (Office of the Assistant Secretary of Defense, 2000). The Navy QOL survey respondents were much more senior as 46.1% were O-1 to O-3 and 52.8% were O-4 to O-6. This may have an impact on the results as the large majority of those surveyed have passed the ten-year career point. Although women do have much lower retention rates up to retirement, the influence of retirement benefits likely affects the retention decision.

Table 4. Paygrade of Female Officers in the 2002 Navy QOL Survey Compared to the Paygrade of Female Officers in the Navy and DOD in 1999.

<b>FEMALE OFFICERS</b>	2002 Navy QOL Survey (n=887)	1999 Navy (n=7,669) <sup>a</sup>	1999 DOD (n=30,031) <sup>a</sup>
W-2 through W-4	1.1% (10)	--	--
O-1 through O-3	46.1% (409)	62.7% (4,810)	66.3% (19,913)
O-4 through O-6	52.8% (468)	37.2% (2,849)	33.6% (10,090)
O-7 and above	0.0% (0)	< 0.1% (10)	< 0.1% (28)

<sup>a</sup> Data from the *FY1999 Population Representation in the Military Services Report*

Note: W-2 through W-4 were not reported in the *FY99 PopRep Report*

The female officer participants in the Navy's QOL Survey were found in great numbers to be on shore tour, not to have spent time away from their permanent duty station in the past 12 months, not to have deployed in the last five years, and never to have served aboard a ship (see Table 5). Job experiences for personnel on shore tour or in positions that do not require deployment are more akin to a civilian job than the

standard Navy operational experience. The sample of female Naval officers from the *2002 Navy QOL Survey* is likely no different from the job experiences of the overall female Naval officer population as opportunities for operational careers have been limited. The changes in recent years allowing more women to go into operational jobs will take time to build up adequate female representation in these occupations. The low percentage of operational female officers likely reduces the conflict between family and the military that is the focus of this study.

Table 5. Job Experiences of Female Officers in the 2002 Navy QOL Survey.

<b>FEMALE OFFICERS</b>	2002 Navy QOL Survey	Navy/DOD
<i>Current Billet</i>	(n=884)	
Shore	73.1% (649)	Not Available
Sea	22.5% (200)	"
Other	3.9% (35)	"
<i>Days Away from Home in Past Year</i>	(n=884)	
None	16.4% (145)	Not Available
1-30	41.0% (362)	"
31-60	15.2% (134)	"
61-120	12.0% (106)	"
121-180	7.0% (62)	"
181-240	5.2% (46)	"
More than 240	3.3% (29)	"
<i>Deployed in Past 5 Years</i>	(n=879)	
None	60.5% (532)	Not Available
One	22.8% (200)	"
Two	11.4% (100)	"
Three or more	5.3% (47)	"
<i>Served Aboard a Ship</i>	(n=878)	
No, never	51.0% (448)	Not Available
Yes, in the past	34.1% (299)	"
Yes, currently	14.9% (131)	"

The 2002 Navy QOL Survey respondents were chosen to represent the entire Navy, not specifically the female Navy officer population, so it is not surprising to see minor differences between survey respondents and the overall Navy population. The

family status (marriage rates and ages of children) was sufficiently representative of the population and the job experiences are common amongst female Naval officers. The one area that might skew results is the seniority of the survey respondents. Unfortunately, because the required grouping of paygrades to protect the confidentiality of survey respondents, this could not be controlled in the analysis without eliminating over half of the data.

## B. QUESTIONNAIRE

The Navy QOL Survey was the instrument used to “determine the perceptions that Sailors have of the QOL in the Navy” (G. L. Wilcove, personal communication, December 15, 2003). The 2002 QOL Survey was the second such survey following the original Navy QOL Survey that was administered in 1999. Minor changes were made to the original survey to include the deletion of items peripheral to the measurement of life domains, the addition of two new domains (not used in this study), and the option of a Web version in addition to the conventional paper version that was mailed to Sailors (G. L. Wilcove, personal communication, December 15, 2003).

The 2002 QOL survey is divided into 13 sections dealing with the Sailors’ satisfaction with various life domains (career and job, shipboard life, personal health, sailor preparedness, residence, neighborhood, leisure and recreation, relationships with friends/relatives/spouse/children, personal development, standard of living, spiritual well-being, life as a whole, and overall satisfaction with life). The questions presented in 13 different life domain categories ask respondents to rate their satisfaction with related topics/issues on a seven point scale ranging from “completely satisfied” to “completely dissatisfied.” At the end of each section a question provides the respondent the opportunity to decide whether their overall satisfaction with the life domain contributes to their desire to “stay in” or “leave” the Navy.

The inflation of satisfaction reporting on surveys should be addressed at this point. There has been a tendency for American workers to be hesitant to report dissatisfaction with their work (Hanson, 1992). In the case of the Navy’s QOL Survey several factors minimize the impact of this problem. First, the questionnaire measures

multiple areas of satisfaction within each life domain. For example, in the job satisfaction domain the questions range from satisfaction with pay and benefits to satisfaction with the physical environment of the work place (23 areas in all). Second, the survey is explicit about strict confidentiality, citing on the opening page that “responses will never be singled out individually” (Instructions page, *Navy QOL Survey 2002*). Both of these factors improve the chances that an accurate assessment of job satisfaction was collected.

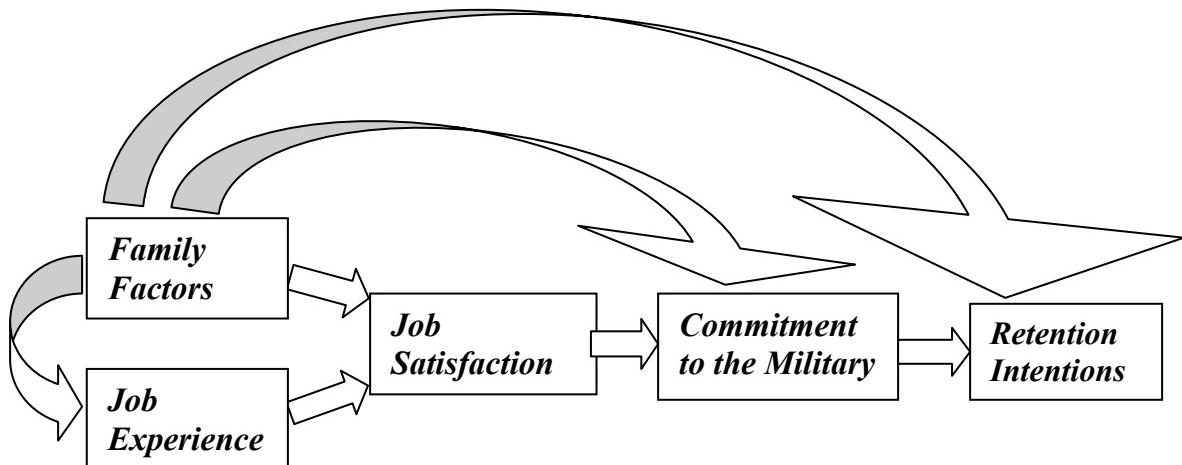
The survey also contained family and job demographics in the background section. The background information included gender, race, age, marital status, spouse’s employment situation, dependents, paygrade, time in current paygrade, time on active duty, current billet (shore/sea), and type of ship/activity currently assigned. In keeping with the strict confidentiality of the survey the paygrade data of the survey respondents were grouped into three categories (W-2 to W-4, O-1 to O-3, and O-4 to O-6). With the exception of paygrade, all other data included the full range of answers offered in the QOL Survey.

## C. ANALYTIC STRATEGY

### 1. Path Model for Predicting Female Officer Retention

The focus of this study was to determine the effects of military/family conflict on female Naval officer retention intentions. Previous research on retention issues points to the impact that family factors, personal development, personal health, job satisfaction, and commitment to the military have on retention of both male and female service members. These topics cover a wide range of areas of possible military/family conflict. Many of these areas may influence one another in addition to their impact on retention intentions. The path model created in this study to specifically predict the retention of female Naval officers included many aspects of these areas (see Figure 1).

Figure 1. Path Model for Predicting Female Officer Retention.



The model in Figure 1 illustrates the prediction that family status will have a direct effect on a number of areas surrounding retention intentions. For example, family factors (presence of spouse and/or children and satisfaction with time spent with relatives) will have a direct effect on job experience, job satisfaction, commitment to the military and retention intentions. Job experiences (deployments, billets, etc.) are predicted to have a direct effect on job satisfaction. Job satisfaction then is predicted to have a direct effect on commitment to the military. Finally, commitment to the military was predicted to have a direct effect on retention intentions. Family factors will have an indirect effect on retention intentions through the predicted relationship between the other constructs (job experiences, job satisfaction, and commitment to the military). The total effect of family factors on retention intentions can then determined by the sum of all the direct and indirect effects of family factors.

The Navy's Quality of Life Survey is meant to gauge the satisfaction of the entire Navy population and not specifically female officers. Two areas mentioned in Chapter II (Literature Review) that were not included in the path model because of the general nature of the Navy's QOL Survey include family support programs and personal health. In the case of family support programs, the survey does not focus on any specific family support program. A few aspects of family support programs are touched on (including child care, medical/dental care, and training programs), however, they did not adequately cover the multitude of military support programs and related issues affecting female officers' families. As for personal health issues, the areas suggested to be creating conflicts for women focus on the continuity of obstetrics and gynecological (OB/GYN) care. This issue was not covered in the health section of the QOL survey. To adequately study these issues pertaining to female officers and the family support programs most relevant to female service members would require the administration of a separate survey.

## **2. Description of Constructs**

Specific survey questions were chosen from the 2002 Navy QOL Survey that best represented the constructs chosen in the path model (see Table 6). The 2002 QOL Survey data was straightforward and fairly complete despite the survey instructions for respondents to "leave blank any question you do not wish to answer" (Instructions page, *Navy QOL Survey 2002*). Missing data were common, but these gaps made up a very small percentage of the variables' data (see Table 6). In a few select cases the answers to questions were recoded to better fit the construct. Composite variables were also created to capture satisfaction within a certain area when multiple questions were asked concerning the topic. The following sections describe each construct and any changes that were made to the original Navy QOL Survey data set provided by the Navy Personnel Research, Studies, and Technology (NPRST) Office in Millington, TN.

Table 6. Statistics on the Data from the 2002 Navy QOL Survey Questions Used in the Path Model for Predicting Retention Intentions of Female Officers

2002 Navy QOL Question	Type of Data	Range	Mean	Standard Deviation	Valid Cases (n)
What is your marital status? <sup>a</sup>	Nominal	1 to 2	1.448	0.498	884
Are there children under the age of 21 living in your household? <sup>a</sup>	Nominal	1 to 2	1.630	0.484	881
How satisfied are you with the amount of time you spend with relatives? (composite) <sup>a</sup>	Ordinal	1 to 7	3.799	1.640	862
How many days (past 12 months) have you been away from your permanent duty station? <sup>b</sup>	Interval	1 to 7	2.810	1.558	884
Are you now or have you ever served aboard ship for 90 days or more? <sup>b</sup>	Nominal	1 to 3	2.360	0.728	878
How satisfied are you with the progress of your personal development? (composite) <sup>b</sup>	Ordinal	1.56 to 7	5.808	0.823	881
How satisfied are you with your job? (composite) <sup>c</sup>	Ordinal	1 to 7	5.225	1.098	883
How much do you agree or disagree with (statements on commitment)? (composite) <sup>d</sup>	Ordinal	0 to 7	4.982	1.272	885
At your next decision point, how likely is that you will remain in the Navy? (dependent variable)	Ordinal	1 to 5	3.660	1.508	858
Note: Total Cases (n) = 887					
<sup>a</sup> Family Status Construct					
<sup>b</sup> Job Experience Construct					
<sup>c</sup> Job Satisfaction Construct					
<sup>d</sup> Commitment to Military Construct					

#### *a. Family Status*

The family status construct was made up of three items: marital status, children living at home, and satisfaction with time spent with relatives. Marital status (question 92) in the original survey listed six possible responses (single, married for the first time, remarried, legally separated, divorced, and widowed). To simplify the analysis of the impact of marriage these answers were recoded into a nominal variable with only two categories (married=1, not married=2). The variable for children living at home (question 59) was a nominal variable that required no changes to the original data as it was a “yes/no” question (children = 1, no children = 2). Finally, the variable for satisfaction with time spent with relatives was an ordinal variable that consisted of a

composite or mean of the answers from questions 51a to 51e. These questions asked about the satisfaction (on a seven point scale from “completely satisfied” = 7 to “completely dissatisfied” = 1) with the amount of time spent with parents (51a), grandparents (51b), brothers/sisters (51c), in-laws (51d), and other close relatives (51e). The standardized item alpha for this composite variable was 0.94.

**b. Job Experiences**

The job experiences construct was also made up of three items: days away from permanent duty station in the past year, service aboard a ship, and personal development composite. The survey question about days away from permanent duty station in the past year (question 6) allowed for seven responses (none = 1, 1-30 days = 2, 31-60 days = 3, 61-120 days = 4, 121-180 days = 5, 181-240 days = 6, and more than 240 days = 7). The question on service aboard a ship (question 15) allowed for three responses (currently serving aboard ship = 1, served aboard ship in the past = 2, and never served aboard ship = 3). No changes were necessary for the data in these first two ordinal variables. The variable for personal development was an ordinal variable as well that consisted of a composite or mean of the answers from questions 66a to 66i. These questions asked about the satisfaction (on a seven point scale from “completely satisfied” = 7 to “completely dissatisfied” = 1) with their ability to get along with others (66a), ability to solve problems (66b), ability to make good decisions (66c), intellectual growth (66d), physical appearance (66e), education goals (66f), general competence (66g), self-discipline (66h), and personal goals (66i). The standardized item alpha for this composite variable was 0.90.

**c. Job Satisfaction**

The job satisfaction construct was an ordinal variable made up from a composite or mean of the answers from questions 9a to 9l. These questions asked about the satisfaction (on a seven point scale from “completely satisfied” = 7 to “completely dissatisfied” = 1) with co-workers (9a), pay (9b), benefits (9c), support from supervisors (9d), job security (9e), opportunity for growth (9f), respect from superiors (9g), challenge of job (9h), feeling of accomplishment (9i), leadership of superiors (9j), ability to work independently (9k), and job free from problems (9l). The standardized item alpha for this composite variable was 0.90.

***d. Commitment to the Military***

The commitment to the military construct was also an ordinal variable that was made up from a composite or mean of the answers from questions 8a to 8h. These questions asked about agreement (on a seven point scale from “completely agree” = 7 to “completely disagree” = 1) with the following statements: I would be very happy to spend the rest of my career in the Navy (8a), I enjoy discussing the Navy with people in the civilian world (8b), I really feel as if the Navy’s problems are my own (8c), I do not think that I could easily become as attached to another organization as I am to the Navy (8d), I feel like “part of the family” in the Navy (8e), I feel “emotionally attached” to the Navy (8f), The Navy has a great deal of personal meaning for me (8g), and I feel a strong sense of belonging to the Navy (8h). The standardized item alpha for this composite variable was 0.91.

***e. Retention Intentions***

The dependent variable for the path model was retention intentions. The data for this variable came from the following question (question 5): At your next decision point, how likely is it that you will remain in the Navy (Officers: accepting new orders or extending)? All five possible responses to this question (very likely = 5, likely = 4, undecided = 3, unlikely = 2, and very unlikely = 1) were used in the analysis. The small percentage (2.9%, n=26) that answered, “does not apply/involuntarily separating” were counted as missing data because the reasons for their answer was not known (total missing was then n=29).

**3. Hierarchical Regression Model**

The path analysis model for predicting female officer retention was a recursive model because the causation was not predicted to be reciprocal between variables (Cohen & Cohen, 1983). The variables included in the model are all nominal or ordinal scales with predicted covariates. These elements of the model lend support to the use of hierarchical regression to analyze the model (Tabachnick & Fidell, 2001). In this case the first step of the hierarchical regression was inputting the three family status variables: marital status, children living at home, and satisfaction with time spent with relatives. This produces the direct effect that family status has on retention intentions. The second step of the hierarchical regression was inputting the three job experiences variables: days

away from permanent duty station in the past year, service aboard a ship, and personal development composite. The addition of each step allowed for the direct and indirect effects along with the amount of incremental variance attributed to each construct to be determined. This was especially important for determining the total effect of family status on retention intentions (through the addition of direct and indirect effects). Step three of the hierarchical regression included inputting the job satisfaction composite. The fourth and final step in the hierarchical regression was the addition of the commitment to the military composite into the analysis. All data computations, correlations, and regressions were done by the Statistical Package for the Social Sciences (SPSS) program.

Table 7. Summary of Steps Used in Hierarchical Regression for Predicting Retention Intentions Among Female Naval Officers from the 2002 Navy QOL Survey

STEP	CONSTRUCT	VARIABLE(S)
Step 1	<i>Family Factors</i>	Marital status (Married / Not Married)
		Children under 21 years living at home (Yes / No)
		Satisfaction with time spent with family members (Composite)
Step 2	<i>Job Experiences</i>	Days away from permanent duty station in the past year
		Service aboard a ship for > 90 days (Currently / In the Past / Never)
		Satisfaction with personal development (Composite)
Step 3	<i>Job Satisfaction</i>	Satisfaction with Job (Composite)
Step 4	<i>Commitment</i>	Commitment to the Military (Composite)

#### D. CHAPTER SUMMARY

The methodology used in this study could be divided into three parts: examination of survey participants, review of the Navy's QOL Survey, and the development of a model and plan for testing the hypothesis. Overall the survey participants were found to adequately resemble female Naval officers in the Fleet with only minor exceptions. The main apparatus used in this study, the *2002 Navy QOL Survey*, has been found to be a

proven tool for measuring the satisfaction of Navy personnel. A path model following guidance from previous studies was created and hierarchical regression was used to analyze the effects of the military/family conflict on the retention intentions of female Naval officers.

## IV. DATA ANALYSIS

### A. INTRODUCTION

In this study, hierarchical regression was the chosen method to examine the effects of military/family conflict on female Naval officer retention intentions. The first step in analyzing the data was to clean it by determining the extent of missing data, the necessity to recode certain variables, and the need to create composite variables for the model's constructs. A look into the descriptive statistics of the data set revealed that missing data, although present was a small percentage of the population. Composite variables were created and their standardized item alpha coefficients computed to determine the appropriateness of sets of survey questions as composite variables (see Chapter III.C.2. Description of Constructs). Correlations for the chosen variables were then examined before conducting hierarchical regression. The final step was calculating the direct, indirect, and total effects of family factors, job experiences, job satisfaction, and commitment to the military on retention intentions using path analysis.

### B. ANALYSIS

#### 1. Missing Data

The initial descriptive statistics for each variable revealed that there were not consistent patterns to explain the missing data. In an attempt to gather honest information from survey participants, the survey instructions encouraged participants to “leave blank any question you do not wish to answer” (Instructions page, *Navy QOL Survey 2002*). Because of these instructions, random missing data were to be expected. The missing data in most variables were a very small percentage. Initially, the mean score for missing data per respondents for the survey questions used in this study (questions 5, 6, 8a-h, 9a-l, 15, 51a-e, 59, 66a-i, and 92) was 10.5, which was 1.2% of the sample (n=887).

The one variable where missing data was a factor was in the dependent variable, *career plans at next decision point*. In this case, because the exact reason for participants marking “does not apply/involuntarily separating” (n=26) or leaving this question blank

(n=3) could not be determined, these cases were excluded from the analysis. The purpose of the analysis was to predict retention intentions, so leaving the cases in the sample that did not answer that question would serve no purpose. The total number of cases remaining for the hierarchical regression analysis after this exclusion was 858.

The remaining missing data within the survey was disregarded (not recoded) because it made up such a small percentage of the population (after removing the 29 cases the mean score for missing data for the variables used in this study was 6.1 or less than 1% of the remaining population). Any recoding of this missing data through estimating (i.e. mean substitution) could have inflated or deflated correlations. Deleting cases with missing data was also not a viable solution because the randomness of the missing data would have meant the deletion of too large of a portion of the sample. The SPSS program dealt with the remaining missing data using listwise deletion.

## **2. Correlations**

Similar to findings from Wilcove, Schwerin, and Wolosin (2003) and Hindelang, Schwerin, and Farmer (2004), there was a high degree of significant intercorrelations among study variables (see Table 8) with just a few exceptions. One such exception was found in the correlations between the *satisfaction with time with relatives composite* and both *marital status* and *children under 21 years living in household*. There should be no surprise that these correlations were not significant as these variables measured very different aspects of the family factor construct. The important point was that they were all significantly correlated with the dependent variable, *career plans at next decision point*. Another exception was that the correlation between *children under 21 years living in household* and the *job satisfaction composite* was not significant. This should not have had an impact on this study. The final exception was that the correlation between *served aboard ship* and *career plans at next decision point* was not significant. This was a concern for the analysis, but the *served aboard ship* variable was not removed from the job experiences construct in the path model because of the possible effects of *service aboard ship* variable on the *job satisfaction* variable and possible indirect effects on the *commitment to the military* and the *career plans at next decision point* variables.

Some of the correlations found to be significant should also be noted. One such correlation was the high correlations between the *career plans at next decision point* and

both the *job satisfaction composite* and *commitment to the military composite* (see Table 8). This suggests that job satisfaction and commitment are closely related to retention intentions as predicted in the path model. The negative correlation between the *career plans and next decision point* variable and the *children under 21 living in the household* variable suggests that having children negatively affects retention in this group of female Naval officers. The relationship between *career plans at next decision point* variable and *marital status* variable also points to the possibility that being a married female Naval officer negatively affects retention.

Table 8. Correlations Between Variables from the 2002 Navy QOL Survey Used in Hierarchical Regression/Path Analysis

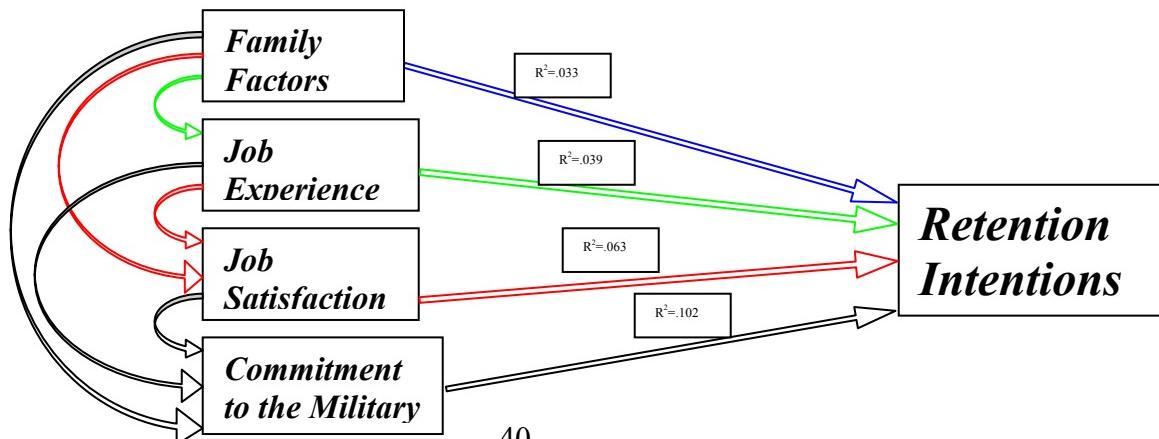
<b>2002 Navy QOL Survey Variables Used</b>	1	2	3	4	5	6	7	8	9
1. Marital status (y/n)	---								
2. Children under 21 yrs living in household (y/n)	.42** n=849	---							
3. Satisfaction with time with relatives (composite)	-.02 n=831	-.04 n=829	---						
4. Days away from duty station in past year	.14** n=854	.23** n=851	-.15** n=834	---					
5. Personal development (composite)	-.14** n=849	-.11** n=848	.22** n=830	-.23** n=851	---				
6. Served aboard ship (current/past/never)	-.17** n=848	-.18** n=845	.17** n=827	-.53** n=850	.22** n=845	---			
7. Job satisfaction (composite)	-.08* n=853	-.05 n=850	.25** n=832	-.18** n=855	.47** n=850	.20** n=851	---		
8. Commitment (composite)	-.10** n=855	-.14** n=852	.22** n=834	-.17** n=857	.35** n=852	.20** n=851	.60** n=856	---	
9. Career plans at next decision point	-.08* n=855	-.12** n=852	.13** n=834	-.11** n=857	.13** n=852	.07 n=851	.22** n=856	.31** n=858	---
M	1.45	1.63	3.80	2.81	5.81	2.36	5.22	4.98	3.66
SD	0.50	0.48	1.64	1.56	0.82	0.73	1.10	1.27	1.51
**Correlation is significant at the 0.01 level (2-tailed)									
*Correlation is significant at the 0.05 level (2-tailed)									

### 3. Hierarchical Regression

Hierarchical regression allows for priority to be assigned to variables when they are entered into a regression. This enables the effect of the unique variance of a variable as well as the overlapping variance with other variables to be determined (Tabachnick & Fidell, 2001). In this study, the hypothesis that family factors have a major impact on retention intentions of female Naval officers results in priority being given to the variables within that construct. In further developing the model it was predicted that multiple constructs also impact retention intentions, to include job experiences, job satisfaction, and commitment to the military. By using hierarchical regression the impact of family factors on all of the other model constructs as well as retention intentions is then possible.

The priority given to the other constructs was based on the literature review as well as a few general assumptions. In this study it was predicted that job experiences are influenced by family factors. Female Naval officers because of the military/family conflict may chose non-operational jobs (i.e., elect not to serve aboard ships or pursue other jobs that require time away from home) and may sacrifice personal development for the benefit of their family. These family factors and job experiences then influence their job satisfaction, as they might be less competitive for promotion. Finally, family factors, job experiences, and job satisfaction are all predicted to influence female Naval officers' commitment to the military. Their commitment to the military, along with the family factors, job experiences, and job satisfaction, was then predicted to influence retention intentions.

Figure 2. Variance Explained in Model



The hierarchical regression was run on the path model (see Figure 1). The first step of the regression used the family factors (*marital status, children under 21 living in household, and satisfaction with time with relatives composite*). This step was found to be significant ( $F=8.27, p<0.001$ ) and account for 3.0% of the variance of *career plans at next decision point* (see Figure 2). The next step of the regression added job experiences (*days away from duty station, service aboard ship, and personal development composite*). This step was found to be significant ( $F=5.44, p<0.001$ ) and account for an additional 0.9% of the variance (see Table 9). In the third step of the regression, job satisfaction (*job satisfaction composite*) was added and found to be significant ( $F=7.75, p<0.001$ ) in accounting for an additional 2.4% of the variance (see Table 9). The final step of the hierarchical regression added commitment to the military (*commitment to the military composite*). This construct was found to be significant ( $F=11.42, p<0.001$ ) and to have the most impact on *career plans at the next decision point* by accounting for an additional 3.9% of the variance (see Table 9). The total variance of career plans at the next decision point accounted for in the hierarchical regression was 10.2% (see Figure 2). This small percentage of variance points to the fact that many other constructs not covered in this study's model impact retention intentions. However, the ability to influence even a portion of retention intention could have major benefits to the Navy.

Table 9. Hierarchical Regression for Predicting Retention Intentions Among Female Naval Officers in the 2002 Navy QOL Survey

<b>Dependent Variable:</b> Career plans at next decision point							
Steps	Independent Variables	B	SE B	Beta	Sig.	$\Delta R^2$	R <sup>2</sup>
Step 1	Marital status (y/n)	-0.070	0.111	-0.023	0.528	---	---
	Children under 21 living in household	-0.215	0.117	-0.069	0.066	---	---
	Satisfaction with time with relatives (composite)	0.056	0.032	0.061	0.083	---	0.030
Step 2	Days away from duty station in past year	-0.060	0.038	-0.063	0.116	---	---
	Served aboard ship (current/past/never)	-0.121	0.082	-0.059	0.142	---	---
	Personal development (composite)	-0.032	0.071	-0.017	0.655	0.009	0.039
Step 3	Job satisfaction (composite)	0.065	0.062	0.047	0.292	0.024	0.063
Step 4	Commitment to military (composite)	0.295	0.050	0.249	< 0.001	0.039	0.102

#### 4. Path Analysis

Path analysis was used to estimate the causal relationship between variables. This method differs from other causal models in that the standardized coefficients (Beta) are used to explain the magnitude of causal effects (Cohen & Cohen, 1980). Use of standardized coefficients allows for comparison between the variables despite differences between the scales of each variable (Cohen & Cohen, 1980). This feature was important for two reasons. First, the scales for satisfaction questions in the *2002 Navy QOL Survey* are common so a comparison using a scale tailored to the survey items is not necessary (Cohen & Cohen, 1980). The second reason is that in this study the ability to compare the magnitude of effects on all variables, allowed when using standardized coefficients (Cohen & Cohen, 1980), was important to fully analyze the impact of family and job factors on retention intentions.

Table 10. Direct/Indirect/Total Effects on Retention Intentions Among Female Naval Officer from the 2002 Navy QOL Survey

	Direct Effects	Indirect Effects	Total Effects
<i>Family Factors</i>			
Marital status	0.023	0.008	0.031
Children under 21 living in household	-0.069	-0.032	-0.101
Satisfaction with time with relatives (composite)	0.061	0.061	0.122
<i>Job Experiences</i>			
Days away from duty station in past year	-0.063	-0.003	-0.066
Served aboard ship (current/past/never)	-0.059	0.026	-0.033
Personal development (composite)	-0.017	0.092	0.075
<i>Job Satisfaction</i>			
Job satisfaction (composite)	0.047	0.132	0.179
<i>Commitment to the Military</i>			
Commitment to the military (composite)	0.249	---	0.249
Note: The direct/indirect/total effects are based on standardized coefficients for purposes of comparison.			

The direct, indirect, and total effects of “Family Factors” variables were not as great as those of the “Job Satisfaction” and “Commitment to the Military” variables (see Table 10). The *satisfaction with time with relatives composite* variable had the most total effect out of the family factors variables and was found to have an evenly distributed direct and indirect effect throughout the path analysis (at each step in the hierarchical regression). The marital status variable showed little indirect effect and had the least total effect of the family factor variables (see Table 10).

A look into the indirect effects of the three family factors variables showed that the *marital status* variable had the greatest indirect effect (0.007) on retention intentions through the *job experiences* variable. The *children under 21 living in household* variable

had the greatest indirect effect (-0.022) on retention intentions through the *commitment to the military composite* variable. The greatest overall indirect effect (0.025) on retention intentions was the *satisfaction with time with relatives composite* variable through the *job satisfaction composite* variable.

In this model, the variables within the first step (*marital status*, *children under 21 living in household*, and *satisfaction with time with relatives composite*) are treated as exogenous variables. This implies that no relationship exists between the variables (Cohen & Cohen, 1980). Although this may be true between the *satisfaction with time spent with relatives composite* variable and both the *marital status* and *children under 21 living in household* variables (significant correlation was not found), this is certainly not the case between the *marital status* and *children under 21 living in household* variables (where a significant and high correlations was found, see Table 8). The result of this aspect of the model was that the indirect effects of these variables might have been under- or over-estimated because of the interactions within the variables in the set (Cohen & Cohen, 1980).

In an effort to examine the potential effect of short-term and long-term retention plans, an additional hierarchical regression analysis was conducted. The Navy Quality of Life Survey provided data not only on the retention intentions at the next decision point (previously used in this study as the dependent variable), but also on long-term retention intentions (desire to stay until retirement). Other studies have combined the short-term and long-term career intention points into a composite variable in their analysis (Wilcove, Schwerin, & Wolosin, 2003; Hindelang, Schwerin, & Farmer, 2004). Although both of these Navy QOL Survey questions measured retention intentions, the difference between them may have a major impact in determining the impact of family factors on short-term versus long-term career decisions.

A closer look at the issue of retention measurement revealed that changing the measurement of retention intentions (dependent variable) in this study had a major impact (see Table 11). The inclusion of “long-term career intentions” (question 2) as the dependent variable (after adjusting for missing data) using the same path model resulted in the explanation of 33.6% of the variance. The *Children under 21 living in household*

and *days away from duty station* variables both had much stronger negative total effects (Beta of -0.323 and -0.164 respectively) than in the original model. The implications of this are that having children and being away from home has a much greater negative impact on retirement intentions than on career plans at the next decision point. Furthermore, the total effect of *personal development composite* and *commitment to the military composite* variables both had a much stronger positive total effects (Betas of 0.251 and 0.296 respectively) on long-term rather than short term career plans. These differences are most likely attributable to the more senior group of survey participants. Another possibility is that an entirely different set of family factors impact the next retention decision vice the retirement intentions.

Table 11. Hierarchical Regression for Predicting Long-Term Career Intentions Among Female Naval Officers from the 2002 Navy QOL Survey

Dependent Variable: Long-term career intentions							
Steps	Independent Variables	B	SE B	Beta	Sig.	$\Delta R^2$	R <sup>2</sup>
Step 1	Marital status (y/n)	-0.021	0.094	-0.008	0.820	---	---
	Children under 21 living in household	-0.635	0.098	-0.228	< 0.001	---	---
	Satisfaction with time with relatives (composite)	< 0.001	0.027	< 0.001	0.998	---	0.149
Step 2	Days away from duty station in past year	-0.137	0.032	-0.166	< 0.001	---	---
	Served aboard ship (current/past/never)	0.073	0.068	1.078	0.282	---	---
	Personal development (composite)	0.263	0.058	0.164	< 0.001	0.114	0.263
Step 3	Job satisfaction (composite)	0.005	0.052	0.004	0.929	0.018	0.281
Step 4	Commitment to military (composite)	0.317	0.042	0.296	< 0.001	0.055	0.336

## C. CHAPTER SUMMARY

The analysis of female Naval officer data from the 2002 *Navy QOL Survey* using hierarchical regression and path analysis showed statistically significant direct, indirect,

and total effect attributed to family factors. The correlations between the major variables used in this study were significant and showed moderately strong relationships. Once entered into the hierarchical regression, the constructs of family factors, job experiences, job satisfaction, and commitment to the military accounted for 10.2 % of the variance of retention intentions. Family factors alone accounted for nearly one-third of the total variance ( $R^2=0.030$ ). The path analysis of the model further dissected the effects of family factors on retention intentions. Although many indirect effects of the family factor variables (*marital status, children under 21 living in household, and satisfaction with time with relatives composite*) were found, other constructs (job satisfaction and commitment to the military) proved to have a greater total effect on retention intentions. Further analysis of the model found that by changing the dependent variable from a short-term to a long-term retention intention, the model accounted for nearly three times the variance ( $R^2=0.336$ ).

## V. DISCUSSION

### A. CONCLUSIONS

The analysis of the path model in this study for predicting the retention intentions for female Naval officers did show that family factors had an influence on the dependent variable, *career plans at the next decision point*. In the hierarchical regression, family factors accounted for 3.0% of the variance of the dependent variable, whereas the entire model (all four steps) accounted for 10.2% of the variance. In the path analysis, family factors had both direct and indirect effects in predicting career plans at the next decision point, although they were not as strong as expected. In comparison, the retention model for married enlisted Sailors with children created by Wilcove, Schwerin, and Wolosin (2003) and the retention model for married enlisted Marines with children created by Hindelang, Schwerin, and Farmer (2004) accounted for 22.1% and 38.4% of the variance in retention intentions, respectively. Although the overall results of the analysis in this study are not as strong as in previous studies the influence of family factors found on retention suggests that reducing military/family conflict may result in positively influencing the retention decision of female Naval officers.

The strength of influence of the family factor variables compared to the other variables in this study was less than expected. The greatest total effect on retention intentions was from the *commitment to the military composite* variable ( $\text{Beta}=0.249$ ). The next greatest total effect was from the *job satisfaction composite* variable ( $\text{Beta}=0.179$ ), followed closely by the first of three family factor variables, the *satisfaction with time with relatives composite* variable ( $\text{Beta}=0.122$ ). The other two family factor variables, *marital status* and *children under 21 living in household*, were ranked fourth ( $\text{Beta}=-0.101$ ) and eighth ( $\text{Beta}=0.031$ ) out of eight, respectively. This lack of a total effect on the part of family factor variables may be attributed in large part to the more senior group of survey participants. Once military service members reach the ten-year point, they have often made the decision to stay in the military until retirement. To avoid feelings of dissonance in their life, they may resolve any conflicts they might have

previously had about the military (Szol & Seboda, 1984), to include conflicts involving their family, and therefore feel more committed to and satisfied with their military career as a whole.

Others explanations for the family factor variables' lack of total effect on retention intentions might be found by looking further into the family demographics of this group of survey respondents. The higher percentage of female Naval officers in this study who were married without children and the lower percentage of women who were single without children or married with children suggest that there might be a self-selection bias among female Naval officers. The self-selection may be occurring at the accession point, as the women pursuing a career in the military may be more non-traditional and therefore less likely to marry or have children. Additionally, self-selection may take place when women wanting to start their family get out of the Navy. In the case of this study the self-selection might have occurred before they had the chance to respond to the Navy's QOL Survey.

A more basic level of analysis of the family variables revealed the direction of the relationship between family status and retention intention for this group of female Naval officers. In the correlations of *marital status variable* and *children under 21 living in household variable* with *career plans at next decision point variable*, the results pointed to a negative impact of having a family (spouse or children) on retention intentions. Although these two variables had the least total effect of the family factor variables they certainly point to possible military/family conflicts for female Naval officers.

There is also the possibility that not all the foreseeable family issues for female Naval officers were covered in the three variables that made up the family factors construct. Women have special needs and concerns that were not the focus of the Navy's QOL Survey. The continuity of health care providers and the accessibility of child care are just a few examples of topics that have been shown to be important to women, but were not specifically addressed in the survey. Furthermore, the path model in this study was based on enlisted retention research and modified to account for research found in male officer retention studies, as well as several unpublished female officer retention

studies. Factors affecting officers, and, more specifically, women, might change the retention model more than predicted in this model.

Other factors might have also been responsible for down playing the impact of family factors on retention intentions in this group of female Naval officers. In the area of job experiences, female officers have not yet been fully integrated into the operational Navy. More operational jobs are now open to women; however, it will take time and additional efforts to ensure these jobs are welcoming to women before they are adequately represented in these occupations. Furthermore, reporting dissatisfaction with family issues in the Navy may not be an acceptable stance for women to take when trying to fit into the male dominated world of the Navy. Women may not report problems that men do not see as major problems to avoid negative attention. Finally, more women today may be choosing to delay starting their families until later in life in order to pursue a career (Moen, 1992). It is possible that a majority of women in the Navy have made this choice as well. The question then becomes whether or not this is healthy or fair for women to be expected to delay starting their family in order for them to succeed in the military?

As previously mentioned, the analysis of this model accounted for 10.2% of the variance in retention intentions. This still leaves a considerable amount of variance to be accounted for by other factors not covered in this model. The other nearly 90% of variance is certainly important to examine. From a family model perspective several explanations for the model's lack of predictive power may be due to the variables on the Navy QOL Survey, the variables selected for study, and the various ways the outcome – retention intent – can be measured.

First, the variables chosen in this study might not have fully represented the constructs in the model. For example, having a spouse or child in itself may not adequately account for all of the possible conflicts that can arise with having a family (spouse/children) in the military. The questions from the *2002 Navy QOL Survey* were a good starting point for researching satisfaction with the Navy, but they could not possibly cover all of the family factors that effect retention intentions.

Second, it becomes obvious from looking at the modest variance accounted for by this model that the complexity of career decisions goes beyond the impact of family factors shown in this model. Other factors such as a service member's financial status, career accomplishments, view of military leadership and current world events certainly also might influence retention intentions. These abstract constructs are often hard to measure and may also be affected in some way by family factors.

Finally, retention decisions occur at various points in a service member's career and can be measured in several ways. The method chosen for measuring retention is an important aspect of any study and can have an impact on the outcome. For this study the retention decision was measured by using the next point at which the military member could leave the military (the end of their next commitment). Other studies have included both the short-term (i.e., next decision point) as well as the long-term (i.e., retirement) career intentions.

Despite the existence of other constructs that might influence retention intentions and limitations with model constructs, it was evident from this study that family factors do influence retention intentions among female Naval officers. In the military, retention is an important issue across all demographic groups and a continued effort should be made to identify specific areas closely related to the retention decisions of female officers. The military/family conflict is not likely to subside any time soon. As more women continue to enter the military, it is likely that more may possess contemporary ideals, desiring both a family and a career, which would increase the military/family conflict. Military policy makers should study the areas and other factors affecting female officers in an attempt to create policies that will influence an even wider spectrum of people.

## B. LIMITATIONS

This study had several limitations that must be taken into account when interpreting the results. These included the limitations of the tools of analysis, the scope of the questionnaire, the inclusiveness of model constructs, the existence of selectivity

bias, and the changing nature of the sample population. Each of these limitations may have had an impact on this study in some way and are areas that could be improved upon in future studies of female officer retention.

Previous QOL research on retention used SEM modeling to account for inter-correlated constructs while examining the direct and indirect effects of the independent variables on the dependent variables. In this study the number of female officers in the sample ( $n=887$ ) was not adequate to conduct SEM analysis. Hierarchical regression was determined to be the next best alternative and was used to examine the direct and indirect effects without the ability to fully examine the inner relationships of other variables in the model. As a result, some of the differences in total variance accounted for could be due to the difference in statistical modeling procedures employed.

Limitations can also be found when examining the scope of the questionnaire used in this study. The data collected from the 2002 Navy QOL Survey is meant to gauge the general satisfaction of sailors (men, women, officers and enlisted) on 13 major topics (career and job, shipboard life, personal health, sailor preparedness, residence, neighborhood, leisure and recreation, relationships with friends/relatives/spouse/children, personal development, standard of living, spiritual well-being, life as a whole, and overall satisfaction with life) and does not specifically attempt to cover or address female officer or family issues. Having said this, the variables that were chosen from the survey most closely fit the major constructs taken from the literature review of retention issues. Including too many variables might have resulted in singularity where the variables were redundant or reduce power of the analysis due to the fixed sample size.

Furthermore, family factors are certainly more numerous than those that could be included in the family factors construct as discussed in the conclusion section. Health, financial, employment, education, childcare, family support, and leadership issues are just a few examples of the other family factors addressed in the literature review that might be closely related to retention intentions. The decision to include marital status, presence of children, time with relatives, days away from home, service aboard ship, personal development, job satisfaction, and commitment to the military as the variables

was an attempt to cover as wide a scope of family factors without having redundancy in the independent variables or including too many variables for the given sample size.

Another limitation of this study was that the data from this survey were cross sectional and measured the satisfaction of female officers at one point in time. Although the sample contained a wide variety of women all at different stages of their career it did not account for how they reached their current level of satisfaction. Whether they maintained the same level of satisfaction (or even retention intentions) over time or whether it changed over time cannot be determined from the survey data. A longitudinal study would be needed to accurately determine how retention intentions are influenced and developed.

Selectivity bias might have also occurred in the case of this sample of female Naval officers. Those women who were unsatisfied may have already left the military (this is especially true for the colleagues of the more senior female officers) or those women desiring to have a family who foresaw the conflict with the military may never have joined in the first place. In either case, the data collected in the survey neglects a large portion of women for whom the military/family impact is likely to have the greatest effect on retention intentions. Although this selectivity bias may lessen as more women join the military, the military/family conflict for women will likely increase.

Finally, the dependent variable in this study was retention intentions. Research suggests that retention intentions are an accurate prediction of the actual retention decision when within close proximity of the decision point (Szol & Seboda, 1984). In the data from this study only a very small number of females Naval officers were within six months (16.2%, n=141) of their next decision point. As a result, the reported retention intentions from this survey might not be an accurate prediction of retention. The bottom line is that the only way to study the actual reasons for and demographics of retention is to study both those who stay and those who get out. Unfortunately, data are much harder to get on those who have left the military.

### **C. RECOMMENDATIONS**

Men may still be reluctant to take on the primary role in the family that is often expected when the mother is a military member. This social dilemma must be recognized by the military when developing support programs for all family situations. The Navy can help lessen the stress associated with the new role husbands of female Naval officers must fill by improving family support programs to include female officers and their families. This includes improving job assistance, child care, and spouse groups/activities to provide husbands with the same level of support given to wives of Navy officers. If the Navy is able to improve family support programs to provide for a variety of family needs, the military/family conflict would certainly be reduced and might result in higher retention rates.

The possibility that women leave the military for family reasons (to get married or start having children) leads to the question of what is the solution to allow for significant blocks of time needed to have children without harming a woman's military career. The obvious solution is for the Navy to restructure career paths to be more flexible for women who chose to have a family. The Coast Guard has implemented two separate programs to provide flexibility for both men and women: the Care for Newborn Children and the Temporary Separation Program (Coast Guard Personnel Manual, 1988, chap. 12f). These programs allow for separation for up to two years to take care of family needs associated with a newborn or to pursue career goals (Coast Guard Personnel Manual, 1988, chap. 12f). The time and money lost in retraining these individuals when they return would be significantly less than the time and money required to fully train a new accession to fill the position.

The satisfaction of service members is certainly important in determining retention decisions, however, the interaction between service members and their families with regards to satisfaction with the military and the retention decision is likely a much more powerful factor. Considering that family members have a major impact on service member's retention decision (Bourg & Segal, 1999 and Rosen & Durand, 1995) this aspect of the military-family relationship must be studied to determine the impact and ways to provide for military families. Realizing where the Navy can provide support or

guidance to the service member and her family will likely result in programs that are less expensive and more long-term than the monetary solutions currently being proposed.

Moen's (1992) summary of ways to confront the challenge in society seems fitting for the challenges the Navy faces in confronting female officer retention issues:

We must adopt, as a matter of national policy, basic structural changes in our institutions-modifying the time and timing of employment and providing available, affordable, and quality child care. These changes, along with more flexible life pathways, can substantially reduce the personal strains and the career costs borne so disproportionately by women. But they also can provide men as well as women with greater latitude in shaping their lives and in raising their families. Equally important, these structural changes can engender a more stable and productive work force in an era when economic growth depends heavily on our human resources. The coupling of work and family roles is a major challenge that we, as a nation, have only begun to address, one that stands to be even more formidable in the coming years. (p. 10)

#### **D. FUTURE STUDIES**

The accurate analysis of factors affecting female retention requires a diligent effort as the needs and roles of women in society today continue to change. Future studies must follow groups of women through their entire career measuring their satisfaction and retention intentions along the way to determine the factors that have the greatest influence. By focusing these longitudinal studies on the issues specifically facing women, the military can more effectively reduce the conflicts with the military and improve retention for women in the military.

The current QOL retention models used to examine the retention intentions of Sailors and Marines are good starting points for future research. Once these models have been applied in future studies, exploratory modeling should then be employed to determine the possibility of different QOL models for male and female personnel. By continually improving current models to fit new subgroups the Navy may be able to more easily assess the areas influencing retention intentions.

The questions asked of female Naval officers in future studies need to be greater both in depth and detail to accurately assess the retention issues. Specifically tailored

questions covering areas such as health care, promotion opportunity, career flexibility, education, spouse employment, childcare, mentorship, and leadership influence are important in understanding what is most important to female Naval officers. Men and women are different and finding ways to meet the needs of both genders will improve the morale of the overall military in general, leading to higher retention and readiness.

Future studies must be done to understand more clearly the issues affecting female officer retention. Women are still adjusting to changes in their roles in society and in the military. To ensure that the Navy is making the right personnel policy decisions to keep the talented and motivated female officers in its ranks, it must continue to study these factors as times and society change. A continual emphasis on keeping the brightest in the military will ensure that the U. S. military is ready to confront the challenges of the future.

THIS PAGE INTENTIONALLY LEFT BLANK

## LIST OF REFERENCES

1. Albano, S. (1994, Winter). Military recognition of family concerns: Revolutionary War to 1993 [Electronic version]. *Armed Forces & Society*, 20 (2), 283-302.
2. Allen, N. J. (2003). Organizational commitment in the military: A discussion of theory and practice. *Military Psychology*, 15 (3), 237-253.
3. Ajzen, I., & Fishbein, M. (1980). *Understanding attitudes and predicting social behavior*. Englewood Cliffs, NJ: Prentice Hall.
4. Bourg, C., & Segal, M. (1999, Summer). The impact of family supportive policies and practices on organizational commitment to the Army [Electronic version]. *Armed Forces & Society*, 25 (4), 633-652.
5. Bowen, G. L. (1989). Family factors and member retention: A key relationship in the work and family equation. In G. L. Bowen & D. K. Orthner (Eds.), *The organization family: Work and family linkages in the U. S. military* (pp. 37-57). New York: Praeger.
6. Chief of Naval Personnel (2002). *Navy QOL Survey 2002*. Millington, TN: Navy Personnel Research, Studies, and Technology.
7. Cohen, J., & Cohen, P. (Eds.). (1983). *Applied multiple regression/correlation analysis for the behavioral sciences* (2<sup>nd</sup> ed.). Hillsdale, NJ: Lawrence Erlbaum Associates.
8. Defense Department Advisory Committee on Women in the Services (2003, November 21). *DACOWITS 2003 Annual Report*. Retrieved February 16, 2004 from [http://www.dtic.mil/dacowitzs/tablereports\\_subpage.html](http://www.dtic.mil/dacowitzs/tablereports_subpage.html)
9. Fagan, B. K. (2002). Analysis of determinants of training performance, retention, and promotion to lieutenant commander of naval flight officers. Master's thesis, Naval Postgraduate School.
10. Gade, P. A. (2003). Organizational commitment in the military: An overview. *Military Psychology*, 15 (3), 163-166.
11. Hanson, S. L., & Sloane, D. M. (1992, November). Young children and job satisfaction [Electronic version]. *Journal of Marriage & the Family*, 54 (4), 799-811.
12. Harrell, M. C., Beckett, M. K., Chien, C. S., & Sollinger, J. M. (2002). *The status of gender integration in the military: Analysis of selected occupations* (RAND Doc. No. MR-1380-OSD). Retrieved February 16, 2004 from <http://www.rand.org/publications/MR/MR1380>

13. Hindelang, R. L., Schwerin, M. J., & Farmer, W. L. (2004). Quality of life (QOL) in the U. S. Marine Corps: The validation of a QOL model for predicting reenlistment intentions. *Military Psychology*, 16 (2), 115-134.
14. Hosek, J., Asch, B., Fair, C. C., Martin, C., & Mattock, M. (2002). Married to the military: The employment and earnings of military wives compared with those of civilian wives. Arlington, VA: RAND.
15. Johnson, R. S. (1998). Civilian husbands in the military family: current issues and future concerns. Master's thesis, Naval Postgraduate School.
16. Keegan, T. A., (1999). Study of factors affecting the retention decisions of sea-going female naval aviators and naval flight officers. Master's thesis, Naval Postgraduate School.
17. Laurence, J. H. (2004). Human Resources and National Security. Washington, DC: National Defense University, Industrial College of the Armed Forces.
18. Martin, J. A. & McClure, P. (2000). Today's active duty military family: The evolving challenges of military family life. In Martin, J. A., Rosen, L. N., & Sparacino, L. R. (Eds.), *The military family: a practice guide for human service providers* (pp. 3-23). Westport, CT: Praeger.
19. Military Family Resource Center (March 2000). *Military families in the millennium*. Retrieved March 2, 2004 from [http://www.mfrc-dodqol/pdffiles/milfam\\_millennium\\_fs.pdf](http://www.mfrc-dodqol/pdffiles/milfam_millennium_fs.pdf)
20. Military Family Resource Center (2001). *2001 demographics report: Active duty members (section 2)*. Retrieved March 2, 2004 from [http://www.mfrc-dodqol/pdffiles/II\\_Active\\_Duty\\_Members.pdf](http://www.mfrc-dodqol/pdffiles/II_Active_Duty_Members.pdf)
21. Military Family Resource Center (2001). *2001 demographics report: Active duty families (section 3)*. Retrieved March 2, 2004 from [http://www.mfrc-dodqol/pdffiles/III\\_Active\\_Duty\\_Families.pdf](http://www.mfrc-dodqol/pdffiles/III_Active_Duty_Families.pdf)
22. Moen, P. (1992). Women's two roles: a contemporary dilemma. New York: Auburn House.
23. Norusis, M. J. (2002). *SPSS 11.0 Guide to Data Analysis*. Upper Saddle River, NJ: Prentice Hall.
24. Office of the Assistant Secretary of Defense: Force Management Policy (November 2000). *Population representation in the military services: fiscal year 1999*. Retrieved February 16, 2004, from <http://www.dod.mil/prhome/poprep99/index.html>

25. Reed, B., & Segal, D. (2000, Fall). The impact of multiple deployments on soldiers' peacekeeping attitudes, morale, and retention. *Armed Forces & Society*, 27 (1), 57-78.
26. Rosen, L., & Durand, D. (1995). The family factor and retention among married soldiers deployed in Operation Desert Storm [Electronic version]. *Military Psychology*, 7 (4), 221-234.
27. Rosen, L. N. & Durand, D. B. (2000). Coping with the unique demands of military family life. In Martin, J. A., Rosen, L. N., & Sparacino, L. R. (Eds.), *The military family: a practice guide for human service providers* (pp. 55-72). Westport, CT: Praeger.
28. Russo, T. J., Dougherty, L. M., & Martin, J. A. (2000). Military Spouse employment: challenges and opportunities. In Martin, J. A., Rosen, L. N., & Sparacino, L. R. (Eds.), *The military family: a practice guide for human service providers* (pp. 87-102). Westport, CT: Praeger.
29. Schwartz, J. B., & Wood, L. L. (Spring 1991). The impact of military life on spouse labor force outcomes. *Armed Forces & Society*, 17 (3), 385-407.
30. Schwerin, M. J., & Wilcove, G. L. (2003). *Quality of life research in the U. S. Navy and Marine Corps: A summary of approaches and results*. Paper presented at the International Society for Quality of Life Studies (ISQOLS), Frankfurt, Germany.
31. Segal, M. W. (1986, Fall). The military and the family as greedy institutions. *Armed Forces & Society*, 13 (1), 9-38.
32. Segal, M. W. (1989). The nature of work and family linkages: A theoretical perspective. In G. L. Bowen & D. K. Orthner (Eds.), *The organizational family: Work and family linkages in the U. S. military* (pp. 3-36). New York: Praeger.
33. Segal, M. W., & Harris, J. J. (1993). What we know about army families (Department of Defense Technical Report). Alexandria, VA: Defense Technical Information Center.
34. Szol, R., & Seboda, B. L. (1984). Follow-on study of family factors critical to the retention of naval personnel. (Department of Defense Technical Report). Columbia, MD: Westinghouse Public Applied Systems.
35. Spain, D., & Bianchi, S. M. (1996). Balancing act: motherhood, marriage, and employment among American women. New York: Russell Sage Foundation.
36. Tabachnick, B. G., & Fidell, L. S. (Eds.). (2001). *Using multivariate statistics* (4<sup>th</sup> ed.). Boston: Allyn and Bacon.

37. Tremble, T. R., Jr., Payne, S. C., Finch, J. F., & Bullis, R. C. (2003). Opening organizational archives to research: Analog measures of organizational commitment. *Military Psychology*, 15 (3), 167-190.
38. United States Department of Homeland Security (1988, January 8). Temporary Separations. In *COMDTINST M1000.6A: Coast Guard personnel manual* (chap. 12f). Retrieved June 6, 2004 from <http://www.uscg.mil/hq/g-w/g-wp/PersMan/PERSMAN%20Opening.pdf>.
39. Wilcove, G. L., Schwerin, M. J., & Wolosin, D. G. (2003). An exploratory model of quality of life in the U. S. Navy. *Military Psychology*, 15 (2), 133-152.
40. Women's Research and Education Institute (n.d.). *Chronology of significant legal & policy changes affecting women in the military: 1947-2003*. Retrieved February 24, 2004 from [http://www.wrei.org/projects/wiu/wim/wim\\_chrono01.pdf](http://www.wrei.org/projects/wiu/wim/wim_chrono01.pdf)

## **INITIAL DISTRIBUTION LIST**

1. Defense Technical Information Center  
Ft. Belvoir, VA
2. Dudley Knox Library  
Naval Postgraduate School  
Monterey, CA
3. Nimitz Library  
United States Naval Academy  
Annapolis, MD
4. Janice H. Laurence  
Naval Postgraduate School  
Annandale, VA
5. Michael J. Schwerin  
RTI International  
Research Triangle Park, NC
6. Gerry L. Wilcove  
Navy Personnel Command (NPRST/PERS-014)  
Millington, TN
7. Commander Robert Proano, USN  
United States Naval Academy  
Annapolis, MD
8. Lieutenant Cody S. Sinclair, USN  
United States Naval Academy  
Annapolis, MD